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ORIGINAL ARTICLES.

THE OCCURRENCE OF ALBUMEN, SUGAR, ACETONE, AND DIACETIC ACID IN THE URINE.

BY J. P. CROZER GRIFFITH, M.D.,
OF PHILADELPHIA.

ALTHOUGH so much has been written on the presence in the urine of albumen in its various forms, and of sugar; as also of certain other bodies whose nature has not been so well known; yet the method of recognition and clinical significance of some of these substances has been, at least in general, so little understood, that any lucid and systematic discussion of the subject cannot fail to be of advantage to the profession. This has been done very clearly in an address delivered by v. Jaksch before the Vienna medic. Doctor-Collegium, in December last, and still more elaborately in a recently published monograph by him on "Acetonuria and Diaceturia."

As Dr. v. Jaksch has requested me to present his views on this subject to the American profession, and encouraged by the fact that I have had the opportunity to study many of the cases on which he has made his observations, to note the reaction of the various tests employed in urinary analysis, and to hear the relation between the symptoms of the patient and the morbid elements in the urine frequently and fully discussed in the wards which he visits, I shall endeavor to give a brief résumé of the matter, so far, at least, as it bears upon the needs of the practising physician. In the examination of the urine for albumen, three tests can be advantageously used:

I. Boil the urine and then add a few drops of nitric acid. Any precipitate produced by boiling is formed either of phosphates or of albumen. If it becomes dissolved on the addition of the acid, it consists of phosphates; if not dissolved, it is albumen.

II. Filter the urine, and then add a nearly equal quantity of acetic acid. To this mixture add a few drops of a solution of ferrocyanide of potassium. A precipitate or cloudiness produced thereby consists of albumen.

III. Add to the urine a solution of caustic potash, and then a few drops of a solution of sulphate of copper. Albumen, if present, dissolves the precipitated oxide of copper, and produces a red-violet color.

As is well known, I. contains two possible sources of error, when but a small amount of albumen exists in the urine. 1st. If too much nitric acid be employed, the albumen becomes redissolved in the form of acid-albumen. 2d. If not enough of the reagent be added, all the basic phosphates may not be converted into soluble acid phosphates, and the albumen will then remain in solution as albuminate.

With II. there is only one possible disadvantage, *i. e.*, that if microorganisms in large numbers have developed, a clear filtrate cannot be obtained. It becomes necessary, in this case, to compare a specimen of the cloudy filtrate with another to which the reagents have been added. Any increase in cloudiness denotes the presence of albumen. But it is easy to prevent the formation of microorganisms by adding a few drops of a solution of carbolic acid to the urine while still fresh. The test is, too, so easy of employment, so extremely delicate, and so reliable, that it cannot be too highly recommended.

A mistake could arise, however, if we fail to observe whether the urine becomes at all cloudy on the addition of the acetic acid. Any cloudiness, at this stage of the procedure indicates the presence of mucin or uric acid. It is easy, of course, to know whether albumen be present, by simply continuing the process, and noticing whether the cloudiness have increased.

These three tests, as already described, can be used in the following manner to determine the nature of the albuminous body in the urine.

If a precipitate is obtained with all three, or, especially, with I. and II., at least serum-albumen is present.

Propeptone is probably present when II. shows the existence of albumen, and I. forms a precipitate only after cooling; which precipitate, filtered and tested according to III., produces the red-violet color. Another test for propeptone is the following: Add to the urine a saturated salt solution, and then some drops of acetic acid. If propeptone be present, a precipitate is produced which disappears on the addition of an excess of acetic acid followed by warming, but which reappears when the solution again becomes cool.

If both I. and II. fail, but III. gives a positive result, there is peptone in the urine. But for the examination for peptone, this test is usually insufficient, and, when the urine contains serum-albumen also, the process, both for propeptone and peptone, becomes much more complicated. The procedures can be found fully described in the standard work of Neubauer and Vogel.

The significance of the presence of serum-albumen in the urine is a subject far too great for discussion here. The occurrence of propeptone, or of globulin, is of little clinical importance, so far, at least, as our present knowledge of them teaches us.

On the other hand, the discovery of peptone is often of the greatest diagnostic and prognostic value. Peptone in the urine is, as a rule, an indication of the formation somewhere in the body of pus, and the subsequent disintegration of the pus-cells. V. Jaksch mentions a case in which there were all the symptoms of deep-seated suppuration, yet no peptone could at any time be found in the urine. At the autopsy, a

widespread development of sarcomatous tumors was discovered.

Epidemic cerebro-spinal meningitis is accompanied by an extensive production of pus within the meninges of the brain and cord, and an excretion of peptone through the urine. Tubercular meningitis, on the contrary, has no pus, and, provided there are no centres of suppuration in the lungs or elsewhere, has no peptone in the urine. The diagnosis between the two disorders must sometimes be made purely on the presence or absence of peptonuria.

Regarding the examination of the urine for *sugar*, the physician certainly stands ready to welcome any method which is at once accurate, delicate, and invariably reliable. Trommer's test is the best we have had, and is very delicate. But it has been found that the same reaction can be produced by very many other substances, especially if the solution be boiled a considerable time. To be certain, then, from Trommer's test that sugar is actually present, the oxide of copper must be precipitated *before the fluid actually boils*. The test only succeeds, if this precaution is taken, when the urine is relatively rich in sugar.

The method of Emil Fischer seems to fulfil all the requirements. It is simple and delicate (showing one part of sugar in 100,000 of fluid), and up to the present time, at least, there has been no other substance than sugar found with which it will give the same reaction. The test depends upon the fact that grape sugar with phenylhydracin ($C_6H_5.NH.NH_2$) produces a substance called "phenylglucosazon," easily recognizable to the naked eye, and still more so under the microscope, as consisting of long, yellow, needle-shaped crystals.

The method of procedure is very simple. Mix fifty c.cm. urine and two grammes hydrochlorate of phenylhydracin with one and one half grammes acetate of soda dissolved in twenty c.cm. water. Warm gently (preferably over a water bath), and in ten or fifteen minutes, if sugar be present, the phenylglucosazon is precipitated, usually in crystalline form; sometimes amorphous. Even if the latter be the case, still some of the characteristic crystals can be found under a microscope of low power. Or the amorphous mass can be made to recrystallize out of alcohol. This method is exceedingly delicate, as already stated. I remember very distinctly a case of tumor of the cerebellum, in which the presence in the urine of sugar was made perfectly evident by Fisher's test, while that of Trommer gave no clear result. The procedure can of course be still further simplified by keeping the solution of acetate of soda ready for use, and by *measuring* the phenylhydracin after the first weighing to determine the volume.

The subject of acetonuria and diaceturia, which v. Jaksch has treated exhaustively in his monograph, deserves to receive more general attention. Of the various tests for acetone, the following (Legal's) is the one most easily carried out, and is reliable except where the urine contains but small quantities of the substance. A few crystals of sodium nitroprusside are shaken with water in a test-tube, thus preparing a fresh solution of the chemical. Some drops of this are added to the urine to be examined, and the mix-

ture is then made distinctly alkaline by the addition of a solution of caustic potash. A red color is thereupon developed, whether or not acetone be present. This color rapidly fades; but if twenty or thirty drops of acetic acid be added, there appears after some seconds, in case acetone be present, following the course of the drops of acid, an intense, deep purple color.

But, as a rule, the quantity of acetone is too small to be detected in this manner, and it becomes necessary to isolate it by the distillation of the urine, previously slightly acidulated with sulphuric acid. This is a process too tedious and troublesome to be commonly employed.

In case, however, one wishes to distil, and then test the urine, the following methods especially recommend themselves:

1st. The iodoform test of Lieben—the most delicate—is as follows:

Add to the distilled urine a small quantity of potassium hydrate; then some drops of a solution of iodine and potassium iodide. If acetone, even in minute quantity, be present, a heavy yellow precipitate (iodoform) is *at once* produced. The only source of error in the use of this test is the possible presence of alcohol in the distillate, in which case, however, the formation of iodoform crystals takes place *but slowly*.

2d. Gunning employs, instead of the potassium hydrate and the solution of iodine and the iodide, ammonium hydrate and the tincture of iodine. Alcohol then causes no precipitate, while acetone produces one of iodoform, in addition to a black deposit of iodine which always falls although there may be no acetone. The precipitated iodine is soon redissolved in case the urine contains much acetone. If it contain but little, the iodoform crystals may be seen after 24 to 48 hours forming a thin layer resting upon the black precipitate of iodine.

3d. Reynolds's test: This depends on the solubility of mercuric oxide in acetone. A solution of caustic potash is added in excess to a solution of the bichloride of mercury, thus precipitating the oxide of mercury. This is mixed with the distillate to be examined, and the mixture then filtered. If acetone be present, a portion of the mercuric oxide has been dissolved by it before filtering, and can be detected in the filtrate by the ordinary reaction with sulphide of ammonium.

The method of Legal, previously described, is not so useful for the distilled as for the undistilled urine.

Diabetic acid has the peculiarity that it produces with a solution of the chloride of iron a Bordeaux-red color. Also that urine containing it yields very distinctly the various reactions for acetone. Yet the matter is not quite so simple as it would at first appear, inasmuch as there are a number of other substances which can produce the same, or a very similar coloration. Such, for example, are salts of formic and acetic acids; carbolic and salicylic acids, decomposition products of thallin, antipyrin and kairin, etc. To prove positively the existence of diacetic acid in urine, v. Jaksch advises the following procedure. To urine as fresh as possible are added a few drops of a solution of chloride of iron. If a

precipitation of phosphates takes place, it is removed by filtration, and the filtrate again tested. In case a Bordeaux-red color is produced, a portion of urine is boiled, and another portion acidulated with sulphuric acid, and shaken with ether. If the red coloration disappears on boiling the specimen of urine in which the test has already been made; if the reaction occurs but slightly, or not at all in the urine prepared by boiling; if after twenty-four hours the red color produced by testing the ether extract grows pale; and if, however, the reactions for acetone in the urine are very distinct; then we have to do with diacetic acid. V. Jaksch particularly emphasizes the fact, that, although urine containing diacetic acid gives so well the reactions for acetone, yet there is no acetone as such contained in it. Diacetic acid is, indeed, a substance which very readily resolves itself into acetone, alcohol, and carbonic dioxide.

The clinical significance of the presence of one of these two substances in the urine is very different from that of the other. Acetone accompanies cases whose course is, as a rule, favorable; at any rate, its appearance is no sign of ill-omen.

Diaceturia, on the other hand, is a most dangerous complication, and points to an approaching death in coma.

Acetone, in very minute quantities, is a constituent of normal urine. Pathological acetonuria, *i. e.*, where the acetone exceeds 0.01 gramme in the daily amount of urine excreted, accompanies all diseases with *high continued fever*, independently of what the nature of the disease may be. A diminution of temperature in any malady is accompanied by a corresponding lessening of the amount of acetone eliminated; and, on the other hand, if from any cause, whether a relapse or the development of some other disease, the temperature again rises,—acetonuria is again proportionately increased. Acetonuria often, although not necessarily, accompanies *diabetes*. There appears to be no relation whatever between glycosuria and acetonuria. The development of acetone in the urine of diabetic patients is sometimes accompanied by various unpleasant subjective symptoms, such as headache, loss of appetite, disorders of digestion, feeling of weakness, etc., which, however, last but a few hours. Apart from this, acetone in diabetes appears to have but little clinical significance, except that it may be the precursor of, and become substituted by, diacetic acid. In even the early stages of *carcinoma* acetonuria sometimes occurs, and, as in diabetes, is ushered in by subjective symptoms. V. Jaksch believes it probable that the cachectic condition develops sooner in such cases than in those not complicated by the presence of acetone.

Inanition, from whatever cause, is often accompanied by large amounts of acetone in the urine. Likewise, also, certain *psychoses*, accompanied by great mental excitement, or mania, exhibit at times very large quantities of acetone. Another class of cases, very interesting, but very rare, is that in which the acetonuria is a disease *sui generis*, and is the expression of an *autointoxication* with the substance (acetonæmia). I have had the opportunity of seeing two cases which must be assigned to this category. The

first was that of a man brought into the hospital wildly delirious. His previous health had been excellent, and no cause could be assigned for his condition, unless, perhaps, a possible error in diet a day or two before. A physical examination revealed nothing amiss, except that there was in the urine an enormous amount of acetone. After a few days the acetone disappeared, and the man regained simultaneously his usual health.

The second was an exceedingly well-marked case of Addison's disease. The patient, after having been under observation many months, rapidly developed restlessness, excitement, delirium, and finally coma ending in death. In the meantime the urine had been found exceedingly rich in acetone. Diacetic acid never occurs in normal urine, and its presence in the case of adults is always a moment of the gravest import; whereas it rarely accompanies *high continued fever* in patients above the age of childhood; when it does appear it indicates that the malady will probably run a very malignant course. In acute febrile disorders in children, on the contrary, v. Jaksch has found diaceturia comparatively common, and the prognosis is not rendered unfavorable thereby. When accompanying fever, either in adults or children, it usually appears with the commencement of the disease, *i. e.*, it is not preceded by acetonuria, to which symptom, however, it frequently gives place as the fever diminishes. The well-known *diabetic diaceturia*, the precursor of diabetic coma, and often the successor to a long-continued acetonuria, is commonly observed in cases far advanced and much emaciated. It is usually ushered in by subjective symptoms, such as a feeling of weakness, depression, sometimes an inclination to sleep, and occasionally also by a tendency to coma, which either deepens or soon passes away, although the diaceturia continues. Indeed, diabetic patients suffering from diaceturia are liable at any time to develop coma and die. The nature of the diet, or the medicaments employed, appear to have no influence whatever on the presence or the degree of the diaceturia. As a rule, there is no relation between amount of sugar and that of diacetic acid eliminated. Sometimes, however, a sudden diminution of the glycosuria is followed by the appearance of a large quantity of diacetic acid, in which case coma rapidly develops, and death probably ensues.

Diaceturia, like acetonuria, sometimes appears in *mental diseases*, accompanied by conditions of great excitement, in *inanition* and in *carcinoma*. A *coma carcinomatosum*, similar to that of diabetes, and accompanied by diaceturia, has also been described. Death, however, with the symptoms of diabetic coma, can occur *without* the existence of either acetone or diacetic acid in the urine. V. Jaksch, therefore, proposes to do away with the name "*coma diabeticum*," and to apply to all those cases of coma, from whatever cause, which are accompanied by diaceturia, the name "*coma diaceticum*." There is also a diaceturia, the expression of an *autointoxication* from diacetic acid in the system, in which the symptoms appear without the existence of any other grave disease. In adults this is very dangerous, although fortunately of rare occurrence; beginning with vomiting, great

dyspnoea, and jactitation, it soon terminates in coma and death.

In the case of children it is a matter of much less moment, and occurs very much more frequently. V. Jaksch has repeatedly observed children in whom the signs of any other disease were wanting, but whose urine was enormously rich in diacetic acid. In such a case the child feels weak, has a thickly coated tongue, often slight conjunctival catarrh, sometimes vomiting, usually constipation, and very slight or no fever. In two or three days all the symptoms, together with the diaceturia, disappear. Other cases have more strongly developed nervous symptoms; and he believes that all these, as well as a portion of those described as "eclampsia infantum," must be attributed to an autointoxication with diacetic acid.

NOTE.—"Phenylhydracinchlorhydrat," which is, probably, not yet to be purchased in the United States, can be procured from C. A. F. Kahlbaum, Chemische Fabrik, Berlin, S. O., at the cost of six marks (\$1.50) per 100 grammes.

DISINFECTANTS.

PRELIMINARY REPORT OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

XXI.

PRACTICAL EXPERIMENTS ON THE STERILIZATION OF FECES.

BY GEORGE M. STERNBERG, M.D.,
MAJOR AND SURGEON, U. S. ARMY.

In the experimental researches heretofore recorded in this series of papers the germicidal value of various chemical reagents has been established by biological tests made with pure cultures of various microorganisms or with "broken-down" beef-tea. The latter test I consider the most difficult, as the putrid beef-tea, after having been exposed in the laboratory for several days, contains a variety of microorganisms, including several species of bacilli, especially *B. subtilis*, the spores of which have an extreme resistance. The results obtained in these experiments may, therefore, be safely used as a basis for determining the quantity of the chemical agents tested which will be necessary to sterilize fluids containing microorganisms, when these fluids can be fairly compared with the putrid beef solution used in our experiments—due allowance being made on the side of safety when practical recommendations are to be made. The liquid discharges from the bowels of patients with cholera, typhoid fever, advanced tuberculosis, septic diarrhoea, etc., may be fairly compared with our broken-down beef-tea, as regards physical and biological characters, and I should say, in general, that it would be within the limits of safety to prescribe twice the quantity of a given agent, for the disinfection of such material, that has been found necessary to sterilize the same amount of putrid beef stock.

But when we have to deal with formed or semisolid fecal matter the conditions are very different,

and the data obtained in our experiments upon fluid material cannot be applied without making proper allowance for the larger amount of organic material associated with the germs which are to be destroyed, and for the fact that germs enclosed in masses of albuminous material may be protected from the action of the disinfecting agent. Especial care will be required in the practical use of the oxidizing disinfectants, such as potassium permanganate and the hypochlorites of lime and of soda. These agents owe their power to the fact that they are promptly decomposed by contact with organic matter, but this decomposition is entirely a chemical reaction, and only a given amount of organic material can be oxidized by a given quantity of the oxidizing agent; on the other hand, the disinfecting power of such agents is neutralized by a given quantity of organic material, whether this is in the form of living microorganisms, or of dead animal or vegetable matter. If, then, the organic material is in excess, germs embedded in it will escape destruction, and the only safe rule in the practical use of oxidizing disinfectants is to use such a quantity of the disinfecting agent that it shall be in excess after the reaction has taken place.

The following experiments have been made for the purpose of determining within the limits necessary for practical purposes the quantity of the disinfecting solutions heretofore recommended by the Committee on Disinfectants required to sterilize a given quantity of feces (normal).

Standard Solution No. 1.

August. 25.—Four ounces of semisolid feces added to one pint of standard solution No. 1, available chlorine 0.65 per cent. At the end of twenty-four hours no chlorine remained in the mixture, and two culture flasks inoculated with the material broke down—failure to sterilize.

28th.—Four ounces of semisolid feces added to one quart of standard solution No. 1, containing 0.85 per cent. of available chlorine. At the end of twenty-four hours a trace of chlorine (0.01 per cent.) remained; there was no appearance or odor of feces in the mixture—no cultures were made in this experiment.

31st.—Seven ounces of semisolid feces added to two quarts of standard solution No. 1, available chlorine 0.83 per cent. At the end of one hour there was a trace of chlorine in the mixture. Two culture-flasks inoculated remained sterile.

September 5.—Two and one-half ounces of semisolid feces added to one quart of standard solution No. 1, available chlorine 0.9 per cent. At the end of one hour the mixture was found to contain 0.1 per cent. of available chlorine. Two culture-flasks were inoculated at the end of one hour; both broke down after remaining twenty-four hours in the oven. As both flasks contained a pure culture of *B. subtilis* it was evident that this was the most resistant organism present in the material, and that all other organisms were destroyed.

7th.—Six and one-half ounces of semisolid feces added to two quarts of standard solution No. 1, containing 0.9 per cent. of available chlorine. At the end of three hours the available chlorine present

in the mixture was found to be 0.11 per cent., and at the end of twenty-four hours 0.1 per cent. Two tubes inoculated at the end of three hours remained sterile.

I conclude from these experiments that in practice it will be safe to use one quart of standard solution No. 1 for every two ounces of feces to be sterilized. Vallin estimates a complete (daily) evacuation of the bowels at from 150 to 200 grammes—say six to eight ounces. Let us keep on the safe side and allow one gallon of this solution, containing four ounces of chloride of lime of the best quality for the sterilization of a normal alvine evacuation. The daily cost *per capita*, for sterilizing feces would then be less than one cent, for chloride of lime can be bought by the quantity for three and a half cents per pound.¹

Standard Solution No. 2.

August 30.—Two and one-half ounces of semisolid feces added to *one pint* of standard solution No. 2. The material was very completely deodorized by the potassium permanganate in the solution. A thorough admixture and breaking up of the fecal matter was effected in this and in the following experiments by stirring with a glass rod. Two culture-flasks were inoculated at the end of two hours; both remained sterile.

September 6.—Seven and one-half ounces of semisolid feces added to *one quart* of standard solution No. 2. There was a decided fecal odor at the end of twenty-four hours. Two culture-flasks inoculated at the end of twenty-four hours broke down with *B. termo*.

8th.—Seven ounces of semisolid feces added to *two quarts* of standard solution No. 2. Only a slight fecal odor at the end of twenty-four hours. A copper wire dipped into the mixture showed the presence of a salt of mercury in solution—deposit of metallic mercury on wire. Two culture-tubes inoculated in twenty-four hours remained sterile.

Making a liberal allowance on the side of safety, we may say that one gallon of this standard solution, containing two drachms each of mercuric chloride and potassium permanganate, may be relied upon for sterilization and deodorization of a normal alvine evacuation. The cost would be about two cents, if the materials were purchased by the quantity, and the solution made (without expense for transportation) as required.

The following experiments have been made with a solution containing four ounces of mercuric chloride and one pound of cupric sulphate to the gallon of water (standard concentrated solution). For use, this standard solution is diluted by adding eight fluid-ounces to the gallon of water.

August 29.—Eight ounces of semisolid feces added to *one quart* of above solution. Fecal odor not destroyed as well as by standard solution No. 2. Two culture-flasks inoculated at the end of twenty-four hours remained sterile.

September 2.—Three ounces of formed feces added to one quart of the above mentioned solution. Two culture-flasks inoculated at the end of twenty-four hours remained sterile.

The following experiment has been made with solution of carbolic acid.

2d.—One and one-half ounces of formed feces added to *one quart* of a 5 per cent. solution of carbolic acid. Two culture-flasks inoculated at the end of twenty-four hours broke down with *B. subtilis*, a *pure culture*, showing that the spores of this bacillus had not been killed, but that the material had been sterilized so far as *B. termo*, and other putrefactive organisms present, were concerned.

A CASE OF DISLOCATION OF THE HUMERUS IN WHICH DUGAS'S POSTURE-TEST FAILED.

BY WESLEY C. STICK, M.D.,
OF GLENVILLE, YORK COUNTY, PA.

On February 24, 1885, I was called to see Mrs. B., aged about sixty-five years, who had been suffering all winter with a severe cough and a great deal of expectoration, and consequently was greatly emaciated and feeble.

She slipped on an icy walk and fell on her left shoulder, about eight hours before I saw her, from which she was suffering intensely. Upon examination I found a depression under the acromion process of the left scapula. The elbow was hanging from the side of the body and backwards.

The line of the axis of the shaft of the humerus was directed towards the clavicle, where I could easily feel the head of the humerus rotate whenever I rotated that bone. Finally, I applied Dugas's posture-test. She brought her arm tight against the walls of the chest, while her fingers touched the opposite shoulder; this, however, was very painful. I nevertheless was confident that I had to do with a forward dislocation of the shoulder-joint, and attempted to reduce the same as follows:

I tried the method with the heel in the axilla, but was not successful. I had her seated on a chair, my knee in the axilla, an assistant holding the right arm, while another grasped the left humerus above the elbow with one hand, and the forearm, flexed to a right angle, with the other. We now made traction backwards, gradually raising the arm to the level of the shoulder, then bringing it forwards. During this period with one hand I steadied the scapula, and with the other made pressure upon the head of the humerus in the direction of the glenoid cavity. The arm was now brought down, and the deformity had disappeared. Her pain was nearly all gone. She could perform the different movements of her arm with ease, and nearly without pain. She confined her arm in a sling for one week. Since then her arm is well.

I report this case for the purpose of showing that Dugas's posture-test is not infallible, as claimed by Dr. Frank H. Hamilton, or that bringing the arm and elbow against the side of the chest, while the fingers touch the opposite shoulder, is not a "mechanical impossibility" in dislocation of the shoulder-joint.

Her emaciation, and the flaccid condition of the tissues, I think, account for the failure of this *almost* "infallible" test.

September 3, 1885.

¹ Price taken from the last number of the Druggist's Circular.

MEDICAL PROGRESS.

THE CURE OF PULMONARY GANGRENE BY THE INHALATION OF AIR IMPREGNATED WITH CARBOLIC ACID.—DR. CONSTANTINE PAUL, at the recent meeting of the Congress for the Advancement of Science, called attention to the efficacy of carbolic inhalations for the cure of pulmonary abscess.

Seven cases were reported in which the remedy was successfully applied, no failure being recorded. Dr. Paul, in considering the value of the proposed remedy, compares the results obtained with those secured by the inhalation of aromatics, etc., which are eliminated entirely through the pulmonary and bronchial apparatus. These, with the exception of eucalyptus, are pronounced valueless, because not possessing the power of checking putrefaction in the pulmonary tissue.

As a probable explanation of the method by which the carbolic acid acts in checking the putrefactive process, M. Paul refers to the results obtained by various bacteriologists, who have found this agent efficient in the destruction of bacteria.

In view of the fact that pulmonary gangrene is regarded by most authorities as almost constantly fatal, M. Paul considers the results obtained as noteworthy, and that the method is an acquisition to the therapeutics of the disease, and worthy of further trial. — *Gazette Médicale de Paris*, August 29, 1885.

DEATH DUE TO RUPTURE OF SUPPURATING BRONCHIAL GLANDS.—A somewhat uncommon cause of sudden death has recently been the subject of a coroner's inquest, and of some very unjust charges against the medical man in attendance. A little girl, aged 12, was taken to consult Mr. G. A. Tait, who found that respiration was difficult and prolonged, and that the child was feverish. Believing that he had to do with a case of ordinary laryngitis, he gave a dose of ipecacuanha, and, when summoned almost immediately afterwards to attend the child at home, he did not do so, supposing that the mother had been alarmed by the commencement of vomiting. Unfortunately, the child was suffering from tubercular disease of the bronchial glands; the glands had suppurated and broken down, finally opening into the trachea, and causing death in a very short time. Though a rare event, a certain number of cases of this kind are on record; in some a large piece of caseous material has become suddenly detached and impacted in the trachea, causing death in a few moments. The difficulty of diagnosis is exceedingly great, and has rarely been surmounted; the history is of great importance, but, in persons belonging to the class to which this little girl belonged, it is very difficult to obtain, and not very trustworthy. The condition is one which, both from the clinical and pathological point of view, would well repay further investigation. — *The British Medical Journal*, August 29, 1885.

OBSERVATIONS ON HEMIGLOSSITIS.—DR. PAUL GUETTERBOCK, in a paper on hemiglossitis, gives the following résumé of his observations:

1. In several and indeed the most carefully observed cases of hemiglossitis, the extension of the pathological process was observed in the branches of the trigeminal nerve in the affected side of the tongue.

2. In several additional cases of hemiglossitis the participation of the chorda tympani in the disturbance, in addition to that of the right lingual branch of the trigeminal nerve, was at least very probable.

3. The unilateral affection of the tongue is never limited only to the territory of the glossopharyngeal nerve, but a sympathetic affection on the same side throughout the extent of the trigeminal nerve can, with certainty, be confirmed in cases of this order.

4. The influence of the hypoglossal nerve upon the development of hemiglossitis, up to the present time, cannot be demonstrated.

5. In like manner, the same may be said of the vasomotor nerves of the tongue, but their indirect influence in one-sided inflammation of the tongue cannot be denied.

6. In conclusion, the manner in which nervous derangement produces hemiglossitis is not discovered by direct examination, but from its analogy with herpes zoster in other regions of the body, it must be concluded that it is due to divers unfavorable influences, which the affected nerves experience either in their ganglia or in their course to the lingual mucous membrane, and also to wounds, inflammatory processes, and sympathy with pathological conditions of other portions of the nervous system—in a word, to any influence which can produce a unilateral increase of function in a nerve of the tongue.

From such unilateral increase of function may result modification of the affected tissue, and, in consequence of the latter, the introduction of infectious material from which may originate all forms of inflammation, ranging from the superficial formation of isolated vesicles to abscess and total gangrene of one-half of the tongue. — *Deutsche Zeitschrift für Chirurgie*, July, 1885.

THE PASSAGE OF PATHOGENIC MICROBES FROM THE MOTHER TO THE FŒTUS, AND THROUGH THE MILK.—M. KOUASSOFF, by experimental investigations made on lower animals concerning the passage of pathogenic microbes from mother to fœtus, and through the milk, arrives at the following conclusions;

1. The bacilli of charbon, *rouget*, and tuberculosis inoculated on one female passed into the lacteal secretion.

2. Having once appeared in the milk, they remained until the end of lactation, or until the death of the animal.

3. The young fed with the milk containing the bacilli of *rouget*, charbon, or tuberculosis do not contract these diseases, and survive even when the mothers perish.

4. The passage of microbes from the mother to the fœtus depends, probably, upon the existence of direct communication between the bloodvessels of the mother and those of the fœtus. — *Gazette Hebdomadaire de Médecine et de Chirurgie*, August 28, 1885.

THE BACILLI OF LEPROSY.—PAUL GUTTMANN, in a careful study of the bacilli of leprosy, observed in elevated nodosities in a girl twelve and a half years old, found the microbes always collected in cells, a feature which distinguishes them at once from the bacilli of tuberculosis, while the fact that they stain more easily than the latter further distinguishes them.

The bacilli are found especially in the skin, but also in other organs the seat of the disease, and even in the blood. As a rule, the organisms are extremely numerous at the seat of the lesions. Their microscopic appearances are the same in every case, and hence it is no longer doubtful that they are the cause of the leprosy, notwithstanding the failure of attempts to inoculate animals. These seem to be refractory to the disease, inasmuch as in no case has it ever been observed among them.—*Berliner klin. Wochenschrift*, 1885, No. 7.

THE PARTIAL REPRODUCTION OF THE TESTICLE.—PROF. LUIGI GRIFFINI, continuing upon frogs his experiments begun in 1882 upon dogs and cocks, concludes:

1. That in the frog, partial reproduction of the testicle occurs.
2. That the newly formed parenchyma is derived from preëxisting tissue.
3. That the plasmatic cells of the stroma take no part in the production of the new glandular parenchyma.—*Gazzetta degli Ospitali*, August 26, 1885.

THE ABSORBENT POWER OF THE SKIN.—M. C. KOPP, in the *Breslauer Artzl. Zeitschrift*, 1885, No. 6, considers the following propositions to be a résumé of facts found in reference to the absorbent power of the skin:

1. Pure water, or that containing dissolved matter, is not diffused through the intact epiderm.
- Absorption is possible if the normal texture of the skin is destroyed, or if it be greatly macerated.
2. The same facts obtain in reference to alcohol and to alcoholic solutions.
3. There is slight absorption of atomized aqueous or alcoholic solutions, but in so slight a degree that it is of no practical importance.
4. Medicaments applied to the sound skin in the form of ointments, are not absorbed:

This is true of iodide of potassium, veratria, quinine, etc. On the contrary, salicylic acid in solution or in ointment is absorbed, because it possesses the power of rendering the epiderm permeable.

5. In the method of administering mercury by inunction, there is a mechanical penetration of exceedingly minute particles of the metal into the lacunæ of the epiderm, into the glands, and hair follicles. The theory of Voit as to the absorption of sublimated mercury is very probable.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, August 28, 1885.

TEN THESES CONCERNING SPONDYLOLISTHESIS.—DR. LAMBL, on the data afforded by his investigations and studies during a period of thirty years, enunciates the following views as to the causation of spondylolisthesis.

1. For a correct understanding of the origin of spondylolisthesis, foetal hydrorrhachis sacrolumbalis is not merely a plausible, but a necessary presumption.
2. Traces of hydrorrhachis are recognizable in all spondylolisthetic pelvises, and hydrorrhachis is itself pathologically responsible for the deformity of the pelvis.
3. Attempt to deny the responsibility of hydrorrhachis in the production of the deformity, results in a two-fold evil: Excess of theoretical insufficiency, and defect of practical application.

4. Rejection of hydrorrhachis as a causal agent leads to the error of attributing the occurrence of spondylolisthesis to conditions with which it is entirely unrelated.

5. The expressions spondylo-schisis and spondylolysis, are not synonymous, and do not signify the same thing as olisthesis, and can neither be used interchangeably with one another, nor with "fractures" of the vertebræ, nor with attrition effects, similar to fractures, resulting from elongation and atrophy by pressure of the arch of the vertebra, without serious error of understanding.

6. The rudimentary cleft vertebra, which, thirty years ago was described and based upon two spondylolisthetic pelvises, is of historical importance, even for the future, and nothing has been since brought forward to destroy its significance.

7. The so-called "retropression of the sacral basis," "hemiolisthesis," and "congenital olisthesis" were idle inventions, whose non-existence can be proven without special difficulty.

8. Fracture of the inter-articular portion of the fifth lumbar vertebra, and consequent olisthesis, up to the present time has not been recognized in a single case.

9. The explanation of the occurrence of spondylolysis through a violent motion, or traumatic cause, rests upon a false basis, and insufficient knowledge of existing specimens.

10. The presumptive "fracture of the sacral articular process," as of etiological importance in the spondylolisthesis, is, mildly speaking, anatomical nonsense.—*Centralblatt für Gynäkologie*, June 6, 1885.

THE ABSORPTION AND ASSIMILATION OF ALIMENTARY SUBSTANCES.—HOFMEISTER, in the *Archiv für Experimental Pathologie*, 1885, Bd. xix. Hefte 1 und 2, by experimental investigation, has found:

1. That peptone does not exist in a free state in the circulation of the blood, but is found united with the cells.

2. In the adenoid tissue of the intestinal mucous membrane, notably in the Peyerian patches, abundant cellular proliferation occurs in well-nourished animals.

The number of cells in process of segmentation in the follicles and young cells of the efferent lymphatics is greater when alimentation is abundant.

3. As the lymphatic cells of the adenoid tissue are almost entirely composed of nuclear substance, it is necessary that the digested albumen be here transformed into this substance in order to be assimilated, and there thus takes place, in a very simple manner, the transformation of peptones and hemialbuminose into principles of the class of nucleines.

Hofmeister further concludes that the incessant formation of new lymphatic cellules constitutes the morphological expression of the chemical process of assimilation.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, August 28, 1885.

A RARE CASE OF ENCYSTMENT OF A FOREIGN BODY IN THE IRIS.—E. BERGER, in the *Wiener Med. Blätter*, 1885, No. 6, reports the case of a peasant, in whose eye a small fragment of stone about one-twelfth of an inch in diameter was encysted, occupying a position in the iris about midway between the edge of the pupil and the corneo-scleral margin, and projecting into the anterior chamber of the eye. The fragment entered the

eye twenty-five years previously while the patient was preparing a millstone, and caused at the time slight pain, which disappeared in a few days.

Excepting slight loss of acuity of vision in the injured eye, no unfavorable results have occurred.

A few days since, for the first time, slight ciliary injection with pain in the eye, was noticed, but the patient refused to permit the extraction of the fragment.—*Centralblatt für die med. Wissenschaften*, August 15, 1885.

BENZOATE OF SODA IN THE SUMMER DIARRHOEA OF CHILDREN.—DR. GUOSTA believes the diarrhoea occurring in infants in hot weather to be a zymotic disease due to the presence of a special microbe produced by defective diet, bad hygiene and excessive heat being predisposing causes.

The remedy he prescribes for the condition is benzoate of soda uncombined with any other remedy, if the affection is recent, in children of from six months to two years.

After the administration of a purgative, such as calomel or jalap, from sixty to ninety grains of benzoate of soda dissolved in about three ounces of water, administered in twenty-four hours, for two days. The third day a slight purgation with magnesia is followed by further administration of the benzoate of soda.

During treatment the child is rigidly dieted, and nourished simply upon lemonade and a few spoonfuls of wine. Milk and bouillon are proscribed, the child, however, being allowed to nurse four times in twenty-four hours.—*Journal de Médecine de Paris*, August 23, 1885.

THE BINIODIDE OF MERCURY COMBINED WITH THE IODIDE OF POTASSIUM AS AN ANTISEPTIC IN SURGERY.—DR. LOUIS VACHER, in the *Gazette Hebdomadaire de Médecine et de Chirurgie*, of September 4, 1885, recommends the combination of biniodide of mercury and iodide of potassium, by which is formed the iodo-hydrargyrate of the iodide of potassium, a valuable antiseptic, especially in ocular surgery. The salt is four or five times more active than the bichloride of mercury, and the proportion required for antiseptic purposes is only 1 to 12,000. A solution less concentrated is of doubtful efficacy, while in greater strength the preparation becomes irritating and progressively caustic, delaying cicatrization, producing inflammation, and finally causing vesication, especially upon the mucous membrane.

The preparation of the remedy is, according to Bouchardat, easily accomplished by mixing equal parts of the biniodide of mercury and the iodide of potassium, adding sufficient distilled water to dissolve and evaporating, the resulting yellow needle-like crystals being the iodo-hydrargyrate of the iodide of potassium.

THE TREATMENT OF CONTUSIONS OF THE PERINEUM.—MAURICE NOTTA, apropos of a number of observations on the treatment of grave contusions of the perineum—with resulting traumatism of the urethra—as the result of fall, recommends the following treatment as most likely to result successfully:

1. The immediate performance of a long and deep median perineal incision, so as to lay open at once the contused region.

2. If at the end of some hours, owing to the distention of the bladder the symptoms are urgent, on account of the inability of the patient to urinate, he should be catheterized, or hypogastric puncture should be performed in case the posterior portion of the urethra cannot be found.

3. If, on the contrary, perineal incision is followed by evacuation of the bladder, during the subsequent time the patient is under treatment, direct catheterization should be practised, or search for the posterior portion of the urethra be made through the wound.—*Gazette Médicale de Paris*, September 5, 1885.

UNCONTROLLABLE HICCOUGH.—M. LIÉGEOIS, in the *Rev. Méd. de l'Est*, records the case of a young woman who, during twenty-four days, was constantly affected with hiccough. The attack supervened upon a fit of nervous excitement, and was unaffected by treatment with bromide of soda, potash, and ether, although milk and bouillon taken by the patient were not vomited. M. Liégeois, who first saw the patient on the twenty-fourth day of the attack, prescribed strong doses of chloral hydrate and hyoscyamin. During sleep the attack ceased, to be renewed on waking. In a few days the intervals between the attacks became longer, and finally returned only when the patient was excited or swallowed food or drink. A few months subsequent an abscess formed in the right epigastric region, from which a needle one and one-fifth inches was extracted; and, examination being made, M. Liégeois succeeded in discovering and removing eight additional needles, all shorter than the first, with the result of entirely relieving the hiccough. The patient pretended entire ignorance as to how the needles were swallowed.—*L'Abeille Médicale*, September 17, 1885.

EARLY PUNCTURE IN ASCITES.—EWALD, in the *Berliner Klin. Wochenschrift*, No. 16, 1885, advocates the early performance of abdominal puncture in ascites. The objections hitherto advanced against the operation, such as the debilitating effects produced by the loss to the organism of organic principles, the rapid reproduction of the fluid, fear of collapse, and peritonitis, are insignificant as compared with the advantages of early puncture.

By this operation, Ewald holds that collateral circulation is rendered easier, pressure upon the great abdominal glands, as well as that upon the heart, lungs, and intestines, removed. As a result, the functions of these organs are more easily performed, and the assimilation necessary for the support of the economy thus more readily accomplished. In addition, the use of drastic cathartics is also avoided to a greater or less extent, and their consequent evil effect upon the functional activity of the stomach and intestines.

To avoid wounding the intestines in those cases where only a moderate amount of fluid is present, a blunt-pointed trocar may be used, such as the one contrived by Ponfick for peritoneal transfusion.

The operation, Ewald further maintains, does not, as was formerly asserted, shorten the life of the patient, but acts as a palliative measure in those cases in which curative results are impossible.—*Centralbl. für Chirurgie*, August 16, 1885.

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HEALTH STATISTICS OF WOMEN COLLEGE GRADUATES.

ANY effort to give material proof that the higher education of women is attained without injury to either physical or moral health will surely be welcomed. "A Report of a Special Committee of the Association of Collegiate Alumnae" contains the most reliable mass of facts ever brought together before bearing on this important subject.

The work of the Committee appears at a very favorable time. We are having a reaction from the agitation that the book of Dr. Clarke excited; and not only educators, but, what is of even greater importance, the mass of intelligent people are beginning to take a rational view of woman's education and training for important and active positions in life. It never, to us, seemed reasonable to fear injury to the health of women for them to do those things that lie in the direction of the least resistance, and surely we may say that to pursue higher education into adult life in which congenial occupation, and mature judgment, and reasonable self-government are combined, is a safe direction for women to exert themselves in. The popular fear expressed in the controversy waged under the term "sex and education" was aimed at modern methods in the more primary stages of education, and not at higher culture and technical training.

The study of the subject in the report of the Committee is quite elaborate, and makes sufficient account of attendant conditions and individuality to give the tables scientific value. Thus, we have conditions of childhood, college conditions, and conditions since graduation, all tabulated with exactness and fairness.

It is a pleasure to note the entire absence of the

special pleading which has characterized so much of the literature of this subject. On entering college twenty per cent. were below the standard of health, which was reduced to seventeen per cent. on leaving college. There are no figures, that we are aware of, to compare with this except the elaborate statistics of Neison in his work on Friendly Societies, but there is such a wide difference in conditions that their comparative value is greatly impaired. Making allowance for this difference, the ratio of good health is greatly in favor of college life for women.

Relating to more specific conditions, we find that nearly thirty-four per cent. abstained from physical exercise while at college during menstruation, which is largely in excess of women in domestic life; ten per cent. avoided physical and mental exercise at that time, which equals the disability of women in general. Of the 417 instances of disorder, we have but space to note that 112 were of the generative organs, and 137 of the nervous system, while we have but 30 instances of disorders of the brain, and 12 of the eye.

The report touches incidentally upon a subject that, from the point of view of the sociologist, is more important than a matter of individual health. The women upon whom the returns are made show a marked disinclination to marry; and those who are married have an average of but two children to a family. One thing is clear, the women of higher education will not be the mothers of a future aristocracy of intellect. This was predicted more than twelve years ago in an article on woman's relations to the professions, in the *Popular Science Monthly*. Occupation and inclination may tend to this result; but one element of their lives is so absolutely productive of it, that women of higher education and technical training will never be exempt from its operation. They are still occupied with educational work at an age when women who have selected other conditions in life are married, and are mothers.

It has been the dream of some of those who have given heartfelt work to the cause of woman's higher education, that heredity would play an important part in the future in determining through this agency, to the development of a cultured race; but a race, cultured from heredity, will emerge from the environment which has always surrounded it—a gentle, graceful home. Listen to what a talented woman has to say upon women in a relation that touches this subject very closely. Mrs. Oliphant, in her last novel, says: "Let us talk as we will of highly educated women, and of mental equality, and a great many other fine things; but, as a matter of fact, this gentle auditor and sympathizer, intelligent enough to understand without taking much part, is a more largely accepted symbol of what the woman

ought to be than thing more prominent and individual."

We do not make the quotation to disparage woman's efforts to obtain a wider horizon than the fireside or the workshop, but rather to emphasize the fact that while she may preserve her health, and even improve physically under her intellectual training, as the report of the Committee proves, her enlarged moral skyline does not confer any enlarged powers as a social factor. And she gains this at an expense to an element in her nature, the existence and gratification of which are as healthful, actively and potentially, as the functions of circulation and innervation. And yet, in this endeavor, she is the noblest example produced in a form of civilization that is becoming overtrained, and more artificial in every effort that is made to force its human product up the incline to that doubtful altitude called a higher plane. The toil is as hard, the doubt and disappointment as bitter, while the reward, by an unjust discrimination, falls much short of that measured out to her educated brothers. But if this were all, if there were not always before her, dim and undefined like a shadow, an underlying element of her nature, too sacred for words, but not too stern for tears and sighs, that makes its demands in vain, then might we say, that woman in her heroic effort for higher intellectual training and work, has not taken up a burden that for many will be, indeed, hard to bear. None knows this so well as woman herself. She is a creature alive to her emotions and reads them correctly; and knowing all this she takes up the burden of her higher culture with no doubtful or unsteady hand.

FLOATING LIVER.

LANDAU, to whom we are indebted for a most exhaustive monograph on the subject of floating kidney, has issued a companion brochure on the floating liver as associated with the pendulous belly of women. The existence of this condition has been regarded by good observers as doubtful. This was the conclusion arrived at, only a few years ago, by Wickham Legg after a review of the literature of the subject, comprising twenty cases. Landau has now collected thirty-one cases, to which he has added sixteen from his own practice. Of the published cases very many, as shown by Legg, are open to suspicion, and in some the diagnosis has been proved by autopsy to be erroneous. Suspended so closely to the diaphragm by firm ligaments, the anatomical relations of the organ seem most unfavorable to dislocation; indirectly, too, the liver is supported by the intestines filled with gas and liquid, and by the abdominal wall. The tension of the air in the lungs also aids in the suspension. In normal conditions the liver is very slightly, if at all, movable; but in pathological

states it may become ante- or retroverted, or dislocated downward.

The chief cause of mobility of the organ is an absolute increase in the abdominal space, such as follows repeated pregnancies, ascites, and the removal of tumors. It is associated always with pendulous belly, and may exist in various grades. As the extent of motion is limited by the attachment posteriorly at the inferior cava, and anteriorly by the attachment to the navel, the terms dislocated and displaced seem more appropriate than floating. The author thinks that in a large proportion of all cases of pendulous belly some degree of dislocation occurs. The diagnosis does not offer serious difficulties, and though many unpleasant symptoms may occur, the persistence of the condition is not dangerous. The treatment must be directed to the state of the abdomen, and, by proper measures of support, entire relief, if not a cure, may be effected.

PROSTATECTOMY AND PROSTATOTOMY FOR ISCHURIA.

IN the *Lancet* for July 11, 1885, may be found the details of a case of ischuria from enlargement of the median portion of the prostate, in which Mr. EDWARDS afforded complete relief by punching out a portion of the obstructing outgrowth with the prostatectome of Gouley, which is a modification of the exciseur of Mercier. The operation was executed in ten minutes; there was very little bleeding; and the urine was ejected forcibly and in a good stream on the sixth day.

The operation of Mercier, despite the fact, as we are informed by Dr. Gouley, in the *Lancet* for July 17, 1880, that its originator performed it upwards of four hundred times, with excellent success, and without the occurrence of abundant, much less fatal, hemorrhage, has never been looked upon with confidence. With the exception of Reliquet and several other surgeons in France, Teevan and Edwards in England, and Gouley in this country, it appears to be without supporters. To be sure, the objections which have been urged against it are purely theoretical, and not based upon the personal experience and observations of those who condemn it. At the meeting of the American Surgical Association, held in Washington last April, Gouley, who alone in this country has any practical knowledge of the procedure, praised it so warmly that it was difficult to understand why it had not been generally adopted. From his remarks, we ourselves reached the conclusion that it is justified when the retention is complete, and when there is great difficulty or impossibility of passing the catheter, especially if the outgrowth is small. Should further experience conclusively demonstrate good results, surgeons will doubtless practise it before the patient has to resort to the habitual use of the catheter.

Should prostatectomy be looked upon with disfavor, the barrier to micturition may be overcome by internal prostatotomy with the thermo-electric cautery, or by external prostatotomy with the bistoury, as has been successfully demonstrated by Bottini, of Pavia, and Harrison, of Liverpool.

The cases of Bottini, which are recorded in the *Centralblatt für Chirurgie*, No. 28, 1885, are replete with interest. In the first, that of a man sixty-eight years of age, the cautery was held in contact with the median outgrowth for forty-five seconds. A soft catheter was retained in the bladder for four days, when it was removed, and the bladder emptied every six hours; the first spontaneous emission of urine took place on the twenty-second day; and at the end of three months the patient was in robust health; micturition was normal, and the urine was clear and acid. In the second case, that of Dr. Musatti, described by himself, the catheter was withdrawn on the fifth day; there was some scalding on the first two occasions when the bladder was emptied; the patient left his bed two days later; and Béniqué's sounds were subsequently passed until No. 44 was reached. The final result was great improvement in the general health, with micturition every five or six hours. Musatti declares that the operation was less painful than cauterization of the prostatic urethra with nitrate of silver, and recommends that it be performed without an anæsthetic agent.

Cases such as these, showing as they do the complete restoration of the power of micturition in a short time by a bloodless and comparatively painless operation, which, moreover, is not followed by febrile symptoms, certainly entitle thermogalvanic prostatotomy to a careful and extended test.

The objection to this procedure (but it is purely theoretical), is that the relief may not be permanent, from the fact that cicatricial tissue the result of a burn oftentimes exhibits a great tendency to undergo undue contraction. Hence, in such cases, we should deem it wise to keep the part fully dilated by the methodical passage of large steel bougies during the remainder of life.

In the operation of Harrison, the membranous urethra is opened by a median perineal incision; the obstructing portion of the gland is then divided, partly with a straight probe-pointed knife, and partly by divulsion with the finger or a large-sized bougie, until the access to the bladder is felt to be free; and the edges of the wound are kept apart by a gum-elastic tube, through which a smaller tube is passed to conduct off the urine. The tube is retained for a number of weeks, or until a catheter can be made to enter the bladder easily along the natural route; and, on its withdrawal, the use of a large bougie is continued until the perineal wound has

soundly closed, and afterwards it is passed occasionally as a precautionary measure.

In a paper read at the International Medical Congress at Copenhagen, Harrison narrated a case in which he had performed the operation above described. It was one of atonied bladder and ischuria from a nipple-like projection of the median portion of the prostate, in an old man of very childish habits, who could not be made to retain a catheter. The patient was able to go about in ten days, when the cystitis had disappeared, and the urine was discharged at will by turning the tap connected with the drainage apparatus, which was worn for eight weeks. After the closure of the perineal wound, he could retain urine for four hours, the bladder acquired its natural power of expulsion, and there was no residual urine. At the expiration of six months, the man had a paralytic seizure, but it was not found necessary to resort to catheterism.

It will thus be seen that the result was most gratifying, although a more unfavorable case could scarcely have been subjected to operation. The advantages of this over the procedures of Mercier and Bottini are that the nature of the obstruction can be accurately determined through the perineal wound, and that the division of the obstruction can be made with a degree of certainty and precision which cannot be attained with the prostatectome or the galvanic cautery.

A careful perusal of the cases to which we have directed attention must convince the impartial surgeon that the operative treatment of median prostatic hypertrophy when it does not yield to catheterism has been too much neglected. We regard this as a great and comparatively new field of operative surgery, and we trust that our remarks may have the effect of awaking attention to the subject, and of inducing surgeons to give these operations a fair trial.

PHOSPHORUS IN RACHITIS.

THE remarkable results obtained by KASSOWITZ have induced a widespread trial of this remedy in rickets, and recent German journals contain several important articles upon the subject.

HRYNTSCHAK, in twenty-four carefully studied cases, has seen very little good from its use: only five cases were benefited. SOLTSMANN, in sixty hospital and ten private cases, found an early improvement in nutrition and muscular strength, which he attributes to a general stimulation of the tissue changes, and not to any specific action of the drug on the bones. He has never seen enteritis follow its use; on the contrary, the gastric and intestinal symptoms disappear, and as do also the nervous symptoms and the bronchial catarrh. HEUBNER is of the same opinion, and doubts if there is any special action on the bones and teeth.

MONTI holds that the diverse views which prevail on the value of phosphorus result from different interpretations of the phenomena. Those who, like Kassowitz, record prompt and satisfactory action of the drug base their opinion on the improvement of certain symptoms—the healing of the craniotabes, the ossification of the sutures, and the cessation of the laryngismus, etc.; but it is well known that the individual symptoms may disappear while the disease itself continues, or even progresses rapidly in other parts. We can speak of a cure only when the circumference of the head and thorax, and the length and weight of the body, become normal. When the rate of development and the general condition of the children are included in the circle of observation, we find the drug practically useless. EISENSCHITZ, on the contrary, believes, with Kassowitz, that phosphorus has a specific effect in counteracting the injurious agencies which impair the nutrition of the ossifying cartilages.

While, then, the general experience does not seem at all favorable to this plan of treatment, it is only fair to note that the number of cases (1224) treated by Kassowitz was very large, while the opposing results have been obtained from a much smaller series of cases, and we must await further observations before we can decide positively upon the value of the drug in this disease.

THE MEETING OF THE AMERICAN GYNECOLOGICAL SOCIETY.

THE last meeting of the American Gynecological Society was well attended, both by members and by visitors, and its work quite creditable. It presented a striking contrast with the previous meeting at Chicago in at least two respects: First, having a quorum it transacted the business belonging to it. Second, all papers whose authors were present—only two of thirteen gentlemen whose names were on the programme being absent—were read, none of them being crowded out by discussions of other papers protracted beyond their allotted time. The Society ought to be careful not to repeat the injustice which has been done in denying a member, who comes with a carefully prepared paper, the right of reading it because others have occupied so much time in extemporaneous talk. Every medical society has men who are heard not only for their much speaking, but for their many speeches—they are equally at home on every subject, and are always ready to present their views freely and fully. Unfortunately, valuable as their speeches may be, the society hears them at the expense, sometimes, of papers announced on the programme, which are finally read by title, a sort of reading very much like neglectful, if not contemptuous, silence, which may cause heart-burnings, if not permanent alienation.

Another feature of the Washington meeting was the marked absence of western members, only two being present; this ought not to have been so, but as each of the western gentlemen present was honored with an important office, the Society plainly showed how highly it esteemed them.

The papers read were, as a rule, brief, clear, and pertinent. Long papers read before a medical society are usually big blunders, and they are more apt to weary and confuse than to interest and instruct. Indeed, we think it would be wise to limit all papers to thirty or forty minutes; few men can safely, so far as clear information and a favorable impression are concerned, transgress the latter time unless a variety of topics is discussed.

The retirement of Dr. Foster from the secretaryship is to be regretted, though his place is to be occupied by so excellent a successor as Dr. Taber Johnson.

The Society, in its ten years, has accomplished much; its financial condition is good; its continued usefulness and increasing honor are certain.

SOCIETY PROCEEDINGS.

RHODE ISLAND MEDICAL SOCIETY.

*Quarterly Meeting, held at Providence.
September 17, 1885.*

(Specially reported for THE MEDICAL NEWS.)

THE PRESIDENT, DR. O. C. WIGGIN, IN THE CHAIR.

DR. E. T. CASWELL submitted the draft of an

AMENDMENT TO THE BY-LAWS

of the Society, designed to elevate the standard of admission to fellowship, by the following provisions: 1. The Board of Censors on receiving the application for admission of any person as a Fellow of this Society, and after duly examining his diploma, provided it emanated from some medical college of known and acknowledged respectability, and satisfying themselves that he does not profess or intend to practise any exclusive system of medicine, shall refer the candidate to the *Board of Examiners*, and on the receipt of a favorable report of the examination passed, shall recommend him for election. 2. Examinations for admission to this Society shall be conducted by a board of five members to be appointed by the President at the annual meeting. Each year the senior, by appointment, shall drop out, and his successor shall be appointed for five years. The senior, by appointment, shall be the President of the Board. 3. Examinations shall be held in the month of April of each year at such time and place as may be convenient to the members of the Board, and shall embrace the usual branches of medical science taught in recognized medical colleges. The candidate will be required to show that he has an adequate knowledge of the Latin language and has received a good English education. 4. The Board will examine only such candidates as have been referred to them by the Board of

Censors, and will report to the Censors the result of the examination during the first week in May.

The amendment was unanimously adopted.

DR. HERBERT TERRY, of Providence, read a paper on the

PREVENTION OF LACERATION OF THE PERINEUM.

Several noted authorities were quoted on the cause of this laceration. Dr. McCaw, of Providence, had suggested the theory that it might be caused by contraction of the perineal muscles brought on by the pain from distention.

The writer thought that in his own cases the accident had occurred oftenest during the passage of the shoulders, but perhaps as often just at the last moment when the perineum was distended over the lower part of the face. It had also seemed more frequent in case the head was considerably elongated. His conclusion was that laceration is not so often due merely to distention, but to the shape of and direction taken by the distending part.

Dr. Terry explained as follows: "When the progress of the head is stopped by the nape of the neck catching under the arch of the pubes, further pains act upon the head as upon a lever of the third class with the fulcrum at the occiput. The face does not emerge, as the occiput, in a direction perpendicular to the plane of the vaginal orifice. It hooks up the perineum, as it were, from behind and presses upon it, not evenly over its whole surface, as did the round occiput, but over a limited area and in a direction more nearly perpendicular to the surface of the perineum. The more elongated the head the more evident does this lever-like action become. The same conditions hold true in the passage of the perineal shoulder. The narrow presenting part has often seemed to come directly through the perineum without distending it too near its maximum. I am convinced that the parts often begin to tear along the vaginal wall. In one case the rent was distinctly felt after the head had receded and the perineum had contracted." For the prevention of laceration, the writer mentioned the use of lubricants when the parts had become stiff and dry in protracted cases, and also repressing the head during a pain by means of the fingers of the left hand carried over the side and between the legs, while, during the interval, the head is slowly urged forward by one or two fingers of the right hand acting through the recto-vaginal wall.

The writer then said, "acting upon the idea spoken of above, that the lacerations often occurred from the shape and direction of the presenting part, I have used in the last three cases of primiparæ that I have attended, an appliance made for me at one of the rubber stores. It consists of a piece of steel three-quarters of an inch wide and eight and one-quarter inches long, embedded between two strips of soft rubber, vulcanized together, and projecting in every direction three-quarters of an inch beyond the edge of the piece of steel. This makes a plate nine and three-quarters inches long, two and one-quarter inches wide, and a little less than one-sixteenth of an inch in thickness. It is perfectly flexible, and cannot injure the soft parts of the mother, while the steel shank gives sufficient firmness to the centre to distribute the pressure more evenly over the perineum. It does not interfere perceptibly with the

relaxation of the parts by dilatation of the anal orifice, nor does it seem to retard the passage of the child."

Two of the three cases in which the appliance had been tried were said not to be test cases. The remaining case was described as follows: "The perineum I found was one which you will recognize as prone to tear—short, thick, rigid, and apparently set back from the other parts of the vulva. During the course of the labor the head became wedged, apparently between the two tuberosities of the ischia, and it was quite difficult to introduce the forceps through the vulva. After the head had been brought down so as slightly to distend the perineum, the instrument described was well oiled and slipped in between it and the head. The forceps were removed and the head was born after a few pains. During the pains the head was repressed as much as possible, while during the intervals it was carefully and gradually pushed forward by two fingers in the rectum. The orbits, mouth, and eventually the chin were felt through the soft rubber and recto-vaginal wall and were successively acted upon. Upon the birth of the child, the parts did not, as usual, contract forcibly around the child's neck and in front of the shoulders, but were already somewhat distended by the elasticity of the steel shank and the pressure was distributed over the whole, instead of being limited to the portion well back in contact with the point of the shoulder.

"In cases where the head is born last, the body of the child can be carried well forward, and the mouth brought to the vulva, so that air may be obtained, and then plenty of time taken in the delivery of the head. When rapid delivery is necessary, drawing the perineum forward, as recommended by Dr. Goodell, or carrying it forward by Playfair's method will, probably, lessen the degree of laceration. In other positions of the head than occiput anterior, a long diameter is presented at the vulva, and rupture is likely to occur from mere distention. Deliberation in this delivery is of the greatest importance, and a liberal supply of ether or chloroform will reduce the risks of laceration. In the use of forceps it is rarely necessary more than fairly to distend the perineum before removing them; and it seems to me that the risks of laceration are much increased by not doing so. Very many consider, however, that the head may be delivered with forceps with greater safety to the perineum, because the head is held well forward under the arch of the pubis."

DR. D. H. BATCHELDER said he did not believe much in the efficacy of supporting the perineum. It had for many years been his practice, in case of an unyielding perineum, to inject per rectum, gr. $\frac{1}{2}$ or 1 of antimony in tincture of lobelia and starch water, which will cause the parts to yield in twelve or fifteen minutes. Out of 3780 obstetrical cases, he had encountered only 4 cases of ruptured perineum. He thought much trouble in this direction came from the too early use of ergot or the forceps.

DR. CALDWELL reported

A CASE OF LITHOLAPAXY.

The man was sixty-four years old, and had had symptoms of stone for two years. The fragments weighed 160 grains. Time of operation one hour. The man sat up at the end of a week, and resumed business one week later.

DR. WILLIAM H. PALMER showed a specimen of
OSSIFIED OVARY.

Its length was $1\frac{1}{2}$ inches; breadth, $1\frac{1}{8}$ inches; weight, 278 grains. It was removed from the body of a woman aged thirty-five, who died suddenly of heart failure, caused by fright at the breaking of a lamp chimney near her bed, two weeks after her first confinement, from which she had seemed to be recovering well. In the specimen ossification was complete, the whole organ being as dense and hard as bone from any part of the body.

DR. G. D. HERSEY read an excellent paper on the

AFTER-TREATMENT OF TRACHEOTOMY.

The scope of the paper did not include cases where the operation was done on account of foreign bodies, or constriction due to growths, etc., but only cases of fibromembranous disease, and the more accurate title would be "the treatment of tracheal diphtheria after an opening has afforded access to the lower tracheal region."

Immediately after the operation hypodermatic injections of brandy are usually indicated. The patient should be in a large airy room, warmed by an open fire or a base-burner coal stove; all cooking or other work that might cause irritating qualities in the air should be prohibited near the sick room.

From the poisonous nature of the disease, stimulants and forced feeding must be largely relied on. Brandy and milk must be given freely as soon as the patient recovers from the anæsthetic, and rectal feeding employed if indicated. After a few hours remove the inner tube and clean it with a whalebone swab or some instrument flexible and yet firm. "Whenever symptoms of obstruction occur, untie the tapes and remove both tubes, thus gaining free access to the trachea, and try to remove the rattling mucus with the whalebone swab or spongeholder." If there is tough, stringy, muco-pus, and membrane which is too firmly attached to the trachea to be separated by the swab, try the curved forceps. These measures will probably suffice for the first twenty-four hours. But as the disease progresses, more and tougher membrane is formed, filling the trachea and blocking up the lower end of the canula. The child has a violent, strangling cough, and, starting up to a sitting posture, vainly attempts to expel the tough membrane through the canula, and sinks back exhausted. Again and again Nature thus tries to relieve the obstruction, mutely imploring the surgeon's help. Passive oedema of the lungs will soon follow such violent efforts at respiration, and coarse râles can be heard over both lungs.

It is because this condition may come on soon after the operation, and at any time for three or four days afterward, that the medical attendant or a competent trained nurse ought to remain constantly with the patient for four or five days and nights following tracheotomy. Death will surely follow a few of these strangling scenes unless prompt relief is afforded, and, happily, the relief is generally possible. First, steam is the best sedative to this excessive broncho-tracheal irritation. If the room is heated by steam, the pipe may be tapped and steam conveyed by a rubber tube to the bedside. The steam atomizers and portable boilers often recommended, are worthless. They frighten young patients,

and are wholly inadequate for producing the large volume of steam required.

An efficient apparatus may be extemporized as follows: Build a tent of sheets over the bed or crib, and let the tent reach to the floor so that the steam will not escape. Under the sheet and beside the bed place a wooden water pail containing three or four pounds of unslaked lime in lumps, and add a gallon of boiling water, stir well, and the tent will soon be filled with a dense volume of steam at a temperature of about 90° F. This hot, moist atmosphere is very grateful to the patient. After five minutes steaming, or longer, if the breathing and cough continue dry and harsh, remove the tracheotomy tube. Through the opening the surgeon may pass a dull copper curette and thoroughly scrape the mucous surface of the trachea down to its bifurcation. By going carefully around the entire circumference of the windpipe, and even into the bronchi if necessary, he will scrape off and out of the trachea an abundance of tough, fetid membrane, which he must be prepared to catch the instant it appears at the mouth of the wound, or it will be sucked back with the next inspiration. The tubes may then be cleaned, carbolyzed, and replaced. The child is relieved, tries to whisper that he wants a drink, and breathes quite freely for a few hours. Then the wheezing, rapid respiration comes on gradually, and the terrible strangling scene is repeated, to be relieved by the same measures as before. This struggle may go on every four to six hours for five days before the tough membrane gives way to a catarrhal secretion. Various complications may arise. After two or three days the epiglottis, from disease or disuse, fails to shield the larynx, and milk runs down the trachea, setting up violent coughing, and oozing out around and through the canula. At this time it is better to feed wholly by rectal injections. Or the canula may press against the œsophagus, causing obstinate vomiting and requiring the removal of the tube for a few days. Capillary bronchitis or pneumonia may occur, though not usual during the first three or four days. The usual treatment should be employed.

The greatest care must be taken to secure absolute cleanliness of the patient, his neck and wound, the tubes and tapes, the night dress and bedding. In no surgical procedure is a faithful, skilful nurse more necessary than here. Milk, alcohol, ammonia, digitalis, and iron are the sheet-anchors in this disease, and must be pushed to the utmost tolerance of the patient. Digitalis is needed especially, because the labored respiration taxes the heart severely. Bromide of sodium or spts. lavand. and ether will often be needed to allay nervous restlessness.

Diphtheria of the wound is a complication that sometimes occurs, and is treated by frequent removal of the tube, and cleanliness. Dusting powders are not applicable to the wound, but iodoform or ælum, mixed with glycerine, may be painted over an unhealthy surface, and dilute tincture of iodine can always be brushed lightly over the edges of an advancing inflammation. Sucking the wound with the surgeon's lips to remove false membrane is generally more foolhardy than necessary. Steam, the dull wire curette, the curved forceps, and the flexible whalebone sponge holder are adequate to relieve even the most desperate cases.

The writer then described two cases in point.

Case I.—I was called hastily on the third day after the operation, and found the boy (six years old and delicate) exhausted by a recent struggle, lying back on his pillow unconscious, pulseless, making occasional shallow efforts at breathing, and rapidly dying from asphyxia. I injected three or four ounces of brandy hypodermatically, removed the tube, and, with the curette, pulled out several pieces of tough membrane, which, partially dried, had occluded the trachea, and plugged the lower mouth of the canula. More membrane was got out, and half an hour later the moribund boy, resuscitated, drank a glass of milk, and slept quietly.

Case II.—A five year old boy had diphtheritic croup, for which a surgeon performed tracheotomy. He did fairly well for three or four days, and then the trachea and bronchi filled up with membrane and tough secretion which the patient could not expel, and which gradually made respiration impossible. The two attending physicians gave up the case as hopeless, removed the tube as the patient was dying, and gave ether merely for the sake of euthanasia. I was sent for after both the other physicians had left the house, and found the body laid out on a table as dead. The only sign of life was a slight, convulsive gasp about every ten seconds. The boy was speedily put into hot blankets, the tent was thrown over his crib and filled with hot steam, and brandy given freely by hypodermatic injection. Resuscitation was slow, but the heart responded to the stimulus of alcohol in the circulation, the steam softened the dried, tenacious exudate, and the curette cleared a passage to the lungs. Helped by prolonged steaming, our reviving patient coughed up considerable membrane and stringy mucus, and, in about two hours, sat up and drank some milk punch. His convalescence was interrupted by an attack of pneumonia, but he made a good recovery. I am sure that neither of these two lives would have been saved without the use of the curette. The membrane, especially that attached near the wound, becomes dried and tough, and chokes the middle and lower trachea, clinging more and more tenaciously on the second, third, and fourth days after the operation, while the diminishing strength of the patient makes him less and less able to expel it. The curette clears out this obstruction more effectually than any other instrument, and I have never seen its use cause pain, or hemorrhage, or strangling.

A vote of thanks was tendered Dr. Hersey for his valuable paper, and the meeting then adjourned.

CANADA MEDICAL ASSOCIATION.

*Eighteenth Annual Meeting, held at Chatham,
September 2 and 3, 1885.*

THE PRESIDENT, WILLIAM OSLER, M.D.,
IN THE CHAIR.

(Specially reported for THE MEDICAL NEWS.)

MEDICAL SECTION.

WEDNESDAY, SEPTEMBER 2D.—FIRST DAY.

DR. GRANT, of Ottawa, read the report of a case of
ANEURISM OF THE AORTA.

The patient was an old soldier who had suffered from thoracic pain and other symptoms. The disease was readily diagnosed, and he was under observation

for a long time, during the greater part of which he was able to do light work. A large projecting tumor was watched, bulging the sternum and costal cartilages, and ending by eroding these and forcing itself forwards as a mass as large as two fists. He finally died from cerebral embolism.

DR. GEO. ROSS remarked upon the fact that this man had lived a long time—nearly five years—from the onset of symptoms. In the treatment of the case moderate exercise had always been allowed. Dr. Ross believes strongly in insisting upon complete rest for a sufficient length of time, although the present example shows that this is not always necessary to secure a remarkable degree of longevity. The reason here for the long time the man lived was plainly that the aneurism grew from the front of the aorta and pushed forwards, thus avoiding the important centrally situated structures. Dr. Ross inquired whether the physical sign of "tracheal tugging" had been observed. Dr. Grant said it had not been looked for. And in answer to a member, Dr. Ross explained the method of examination to detect "tracheal tugging," and said that he considered the sign one of great value in the diagnosis of aortic aneurism. If present, it seemed to be almost pathognomonic, for he had examined for it in a great number of hospital patients, and had never found it distinctly marked in anyone who was not the subject of this disease. It is quite true, however, that it is absent in many cases of aneurism, for the conditions necessary for its production are, that the tumor bear against the trachea or a large bronchus, and, secondly, that it be not completely solidified.

DR. SHEARD spoke of a case recently under his care. The tumor sprang from the first part of the arch, and the symptom most marked was dyspnoea in severe paroxysms from spasm within the larynx. Prolonged rest appeared to have had a very beneficial effect; this was strictly enforced for three months. Dr. Sheard had used potass. iodid. in pretty full doses, but its employment was always followed by marked depression and lowering of the pulse—so much so that it had to be discontinued. He thought this action of the drug unusual. Dr. Sheard also gave the particulars of a case of aneurism in the descending thoracic aorta which produced plugging of all the great vessels beyond its point of origin.

DR. OSLER remarked upon the importance of considering the question of prognosis in these cases. Dr. Grant's case, for instance, had lived five years and a half, and he had known men with large tumors to live ten years and more. On the other hand, a small aneurism may quickly burst and prove fatal; so much depends upon the location of the growth—those growing anteriorly may attain large dimensions before producing symptoms, and even then life may be prolonged, whilst a small tumor centrally situated generally soon makes its presence known, and is apt to kill within a short time. Those growing from the transverse arch and backwards are likely to produce early symptoms, and quite frequently early death. Those, again, involving the descending part of the arch may last very long. He would also in this case notice the coexistence of disease of the aortic valves, which was by no means common. The absence of any marked degree of hypertrophy of the ventricle was in accordance with what is generally

seen. As regards iodide of potassium, he was satisfied of its great power in relieving the pain so frequently present, but has great doubts as to its assisting in the consolidation of the tumor.

DR. WILKINS spoke of the necessity for limiting the amount of fluid to be allowed to these patients, and alluded to a case of his own in which this principle had been acted upon, and where the man had lived between four and five years.

He would advise reducing the allowance to half a pint *per diem*. He thinks that the necessary result of free imbibition of fluids is distention of the sac for the time being, a condition, of course, unfavorable to cure. In the case alluded to, the "tracheal tugging" had been a marked sign, and the patient died from rupture into the trachea.

DR. ECCLES alluded to a case where he had been obliged to omit the use of iodide of potassium on account of its always rendering the pulse very small and frequent.

DR. WORTHINGTON then reported some cases of

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

He remarked that though the cases he related were indicative of a cerebro-spinal fever, and seemed identical with the so-called epidemic form, they were not sufficiently numerous to show that the disease was extensively prevalent. The notes were then read *in extenso*. The first showed a markedly intermittent type, and it was thought that here, as according to Dr. Radcliffe sometimes occurs, the specific disease was complicated with ague. The other cases were characterized by rapid onset, rigors, headache, rachialgia, convulsions, spasms, and delirium, and later on, somnolence and diplopia. They presented a considerable degree of similarity. The treatment consisted in mercury and iodide of potassium, with application of cold. In later stages, quinine and stimulants.

DR. HARRISON said that it was somewhat remarkable how this disease showed itself in certain restricted localities. He had had six cases, and Dr. Stark, in his neighborhood, seven, four of which had proved fatal.

DR. OSLER said that in the absence of *post-mortem* records it was impossible to be certain of the diagnoses. The cases he had met with in cities and elsewhere were all *sporadic*. Those which he had examined autopsically he found to belong to one of two classes, (a) simple, and (b) tubercular. The former were rare; the latter were distinguished by a more prolonged course, and by being sometimes actually latent. He had recently had charge of a sailor, who having fallen heavily upon the deck of his ship, soon after developed spinal symptoms which were supposed to be due to the injury. The autopsy, however, showed tubercularization of the spinal and cerebral meninges, almost certainly of pretty long duration. The specific fevers also not unfrequently simulate cerebro-spinal fever, especially the malignant form of smallpox and of typhoid fever. The symptoms in all these cases are almost, if not absolutely, identical, and an autopsy alone can set a doubtful case at rest.

DR. TESKEY related a case of tubercular trouble he had lately had which might during life have readily passed for one of cerebro-spinal fever. It began with convulsions, followed by opisthotonos and then coma. The necropsy showed tubercular meningitis complicated by an abscess in the occipital lobe of the brain.

DR. MACDONALD, of Hamilton, spoke also of the necessity for *post mortems*, and deplored the tendency amongst country people to object to this proceeding. During epidemics of cerebro-spinal fever in Hamilton he had a number of autopsies. Whenever the diagnosis proved correct he had found distinct evidences of inflammation of the cerebral and spinal meninges without any tubercle. In several cases the negative conditions discovered pointed to some specific febrile poison as having caused the symptoms.

DR. ARNOTT, of London, Ont., read a paper on

THE SOURCES OF MALARIA.

The existence of malaria is very generally taken as equivalent to presupposing the existence in the same place of a certain germ. It is commonly accepted that one of the chief requisites for malaria is decomposing vegetable matter. The only circumstances required for this to take place, and, therefore, for the generation of malaria, are thought to be the presence of water, exposure to air, and a certain temperature. Dr. Arnett thinks that decomposing vegetable matter is *not* necessary, but that with water and the requisite degree of heat the germ of malaria will be propagated. He thinks, therefore, it is conceivable that this might take place even in distilled water. Many arguments were adduced in support of this view. In different districts the prevalence of ague is not at all proportionate to the amount of vegetable matter in a decaying state. One may find the latter in great abundance with hardly any intermittent, whilst *vice versa*, malaria may abound where decaying vegetable structures may be said not to exist, or to be very sparingly present. Loomis believes that malaria is proportionate chiefly to the heat and moisture without reference to the organic matters. The effect of drainage of land is well known. Phthisis and cholera will thrive under the same physical conditions as give rise to malaria. The writer again emphasizes the opinion that heat and moisture are really the only essentials required to propagate malaria independent of the presence or absence of organic matter.

DR. INGALLS, of Detroit, remarked upon the conditions present in that city. There, the parts built upon consist of a black organic mould, six or eight inches deep, underlaid by a heavy clay subsoil. The superficial drainage is very often defective, and moisture is retained beneath the houses for a long time. This gives rise to many diseases of a malarial type: true intermittent fever, phthisis, diphtheria. Sunlight probably plays but a small part. These malarial diseases prevail when the damp decaying vegetable loam lies under the houses, obtaining only the heat from the general atmosphere. Do we not often fail to recognize malaria in the causation of phthisis, overlooking altogether the miasmatic origin of the latter?

DR. TESKEY said, as regards the bacterial origin of malaria, the points chiefly urged in favor of the view were, that successful inoculations had been made upon animals; and that upon curing the disease with quinine the bacteria had disappeared. The natural history of bacteria in general bore upon the subject under discussion. To cultivate bacteria, heat, moisture, and some nitrogen-bearing substance are necessary. Some get it from the atmosphere, some from albuminous bodies (broth, etc.). Then, in almost every stream we

should find spores and albuminoid bodies of some kind. When there is much vegetable matter there is generally much albuminoid matter. There is certainly much yet to be known of the natural history of these particular germs.

DR. McCULLEY alluded to the persistence with which malarious affections stick to certain houses. There is always some one sick in them. Often, on examining such premises, one finds decaying timbers and low sills. In these places typhoid fever and diphtheria may alternate with the true malarial affections.

DR. BAKER, of Detroit, spoke of the system in vogue in the State of Michigan. The Board of Health receives reports regularly from one hundred physicians in different sections. On comparing these it is found that malaria prevails most when the fluctuations of temperature are greatest, therefore temperature alone seems to control intermittent fever. The difference between the day and night is greatest in summer—it increases as you go South. In the northern part of the State there is no ague. He would strongly urge their system of collecting facts bearing on this disease; it is the only way in which our knowledge can be helped on. He does not consider that the bacillus can yet be accepted as proven.

DR. HARRISON said that in old times in his part of the country, all the cases of pneumonia had a malarial tendency. Now this is not observed, and there is no ague there.

DR. STALHELD mentioned the occasional occurrence of severe attacks of ague during the greatest cold of winter, as opposed to the view that a certain temperature is necessary.

DR. ROSS held that to benefit by this discussion we must restrict it to that of malaria alone. Such affections as some had spoken of—phthisis, typhoid, and diphtheria—are all believed nowadays to be produced by special organisms, having a natural history of their own. In many places these prevail to a very considerable extent, whilst malaria is unknown. It is clear, therefore, that it is not right to quote their existence as indicative of a miasmatic or malarial, although, certainly, of unwholesome conditions.

DR. CLARK said that he had observed these facts in his neighborhood. Near Oakville there is neither phthisis nor malaria. In Oakville they both prevail. The temperature on the lake shore is low, whereas, two miles or so inland it is comparatively warm.

DR. ARNOTT, replying, said that the recent views of Loomis quoted, showed that the current of general opinion is towards the view that the factor of decaying vegetable matter in the production of malaria is not an *essential* one. As regards occurrence of an attack of ague in midwinter, he thought that such cases are to be explained as showing the possibility of prolonged *latency* of the poison, the attack being induced by the depressing action of intense cold.

DR. HOLMES, of Chatham, read a paper entitled

OBSERVATIONS ON PUERPERAL MANIA.

The paper alluded first, in a general way, to the causes to which an attack of this kind may be attributed. They are chiefly heredity, anemia, and moral influences. To these he would add another, viz., *laceration of the cervix uteri*. Some objections to admitting this would

occur at once; such as, lacerations are very frequent, without the occurrence of mania, which is rare. Recovery from mania often takes place without a laceration's having been cured, and most lacerations heal of themselves, or, at any rate, without treatment, become covered with mucous membrane. Dr. Broca has taught that the central sympathetic nervous system governs man's moral nature. Abdominal disease commonly produces great depression, in marked contrast to the hopefulness of those with thoracic disease. The pregnant woman is really like dry fuel, waiting only the application of a match to burst into flame. *Case I.* Mania three days after confinement; put under restraint; moderate laceration of cervix; died insane after two years. *Case II.* No heredity. Easy labor; after five days melancholic and morose; after three months much worse; suicidal; a laceration which was discovered was treated, and the mania disappeared rapidly. *Case III.* Very violent; after two weeks was sane; remained despondent for two years; then laceration was found; restored to health. *Case IV.* Became insane twenty days after labor; extensive laceration; treated with hot water douches, etc., and a rapid cure effected. *Case V.* Was seen eight months after confinement; was weak, mind affected, melancholy; slight laceration treated; after four months this was entirely healed, and she was quite well. *Case VI.* Was in an asylum; after the cure of a bad laceration was well and went home. Twelve cases in all were presented, of which the above are fair specimens. Dr. Holmes concludes that laceration of the cervix is a frequent cause of puerperal mania, and one which has been hitherto overlooked. He thinks it is of much importance that there should be a gynecologist to every asylum for the insane, and that their investigations into this subject might throw much light upon the somewhat obscure etiology of this affection.

THURSDAY, SEPTEMBER 3D.—SECOND DAY.

The Section opened at 11.30 A.M., DR. HARRISON in the Chair.

DR. J. E. GRAHAM exhibited a specimen of

DISSECTING ANEURISM,

and related the history of the case. The patient had been a soldier in the British Army and was wounded in the trenches, and soon after was invalided and told to avoid exertion as he might die suddenly. Aneurism at the time was evidently suspected if not diagnosed. He recovered health sufficiently to enable him to earn his living, though never strong. He had been under Dr. Richardson's care in Toronto Jail on several occasions, and it was known that he was the subject of thoracic aneurism. A few days before his death there was hemorrhage from the lungs. The condition found post-mortem was as follows: The ascending and transverse portions of the arch were much distended, and immediately beyond the orifice of the left subclavian there was a saccular dilatation adherent to the lung, and at the upper part was a laceration into the tissue which communicated with the bronchial tubes. At the distal portion of the sac were two openings, one of which communicated with the natural lumen of the vessel and the other with the dissecting aneurism. This latter was formed by the blood finding its way through

the middle coat of the vessel and dissecting the inner portion of the media from the outer half of the media and the outer coat. This was continued in almost the entire circumference of the vessel, and extended throughout the thoracic and abdominal portions to the bifurcation where by a large opening the dissecting aneurism again communicated with the lumen or the aorta. Some of the branches of the abdominal aorta communicated with the inner tube, others only with the outer dissecting aneurism. Among the remarkable features of the case are (1) the length of time which this has lasted, probably thirty years at least: the condition of the lining membrane of the dissecting aneurism shows it to have been long in existence—as it is smooth and firm almost like the normal lining membrane, only a little uneven. (2) The unusual extent of the aneurism, involving the entire length of the thoracic and abdominal portions.

DR. WILKINS presented a series of microscopical specimens illustrating

THE BACILLI OF TUBERCULOSIS.

and the fact of their communicability. The first of these were taken from the sputa of a patient suffering from chronic phthisis; the second from the lungs of the same person; the third from a rabbit, which had been inoculated with the tuberculous matter in the anterior chamber of the eye. In each case the bacilli were extremely well shown, and the demonstration was much appreciated by the Section. Dr. Wilkins read some notes descriptive of the experiments he had made on this subject, and pointed out how strikingly such observations exhibited the contagious character of tuberculous matter, and the association with it in every case of the characteristic bacilli which have been so fully described.

DR. J. E. GRAHAM said that he had been much interested in this very satisfactory and complete demonstration of the microorganisms of tuberculosis. It is a fact that some in the profession are still sceptical concerning these tubercle bacilli, whereas an examination of such specimens as these would carry conviction even to the mind of a layman without any special knowledge of the subject.

DR. JAMES STEWART read a paper on

THE CURABILITY OF THE CHRONIC FORM OF INFANTILE PARALYSIS (POLIOMYELITIS ANTERIOR CHRONICA).

The development of the paralysis had been slower and less febrile than in many instances observed, and had been preceded by diarrhoea. The patient was treated with galvanism, and made a good recovery. Dr. Stewart thinks that cases of this character are more amenable to treatment than those with more rapid and acutely febrile onsets. He advised persistent and careful treatment with galvanism, instead of consigning them, as is so often done, to the category of cases for which nothing can be done.

DR. HOLMES considered the case of value, as encouraging the general practitioner to persevere, in the hope of ultimately restoring limbs threatened with permanent paralysis. He inquired whether any other form of treatment in addition was serviceable; also what the reader's views were as to the pathology of the affection.

DR. STEWART, in reply, said that galvanism is the

only thing to be relied upon. It is not definitely known whether the changes are primarily inflammatory or purely degenerative. As regards prognosis, it is important to separate the acute from the subacute and chronic cases.

DR. McKEOUGH, of Chatham, read a paper on

THE USE OF PILOCARPINE IN PUERPERAL ECLAMPSIA.

Three cases were detailed, the principal features of which were as follows: *Case I.* Patient, when seen, had had twelve convulsions, was comatose, and greatly oedematous; the urine loaded with albumen; an attempt at venesection failed; then pilocarpine was given hypodermatically. There was profuse sweating, but at the same time copious bronchial secretion, with loud rattling. The condition became alarming, and the patient died three hours after. *Case II.* At eighth month. Considerable oedema present; passed only one ounce of urine in twenty-four hours; gave purgatives and potassium citrate with digitalis; had vapor bath. Eclampsia supervened; gave 3j fluid extract of jaborandi with good effect. Convulsions continuing, gave morphia sulphate gr. $\frac{1}{4}$. No more convulsions. *Case III.* Convulsions occurred the day before confinement; found semi-comatose; no oedema; urine solid on boiling; gave gr. $\frac{1}{2}$ pilocarpine hypodermatically. At night gave chloral. Next day had no return of convulsions, though she remained lethargic, and was successfully confined. Dr. McKeough considers the use of jaborandi in these cases only an experiment. Barker and Thomas think it of doubtful service. The great depression it produces is against it, whilst in certain conditions the danger of pulmonary oedema and profuse bronchial secretion are great, as shown in Case I. He thinks, from his experience, that it may prove of considerable benefit when used early in cases in which convulsions are likely to occur.

DR. McLEAN said that though most cases of puerperal eclampsia are uræmic, they are not all so. Some arise from peripheral irritation, and resemble the fits which children have from worms and other causes. A case of his illustrates this fact. A multipara, in whom the abdomen was much distended, had convulsions; there was no albumen in the urine. He gave chloroform and delivered; no more convulsions occurred. He considers chloroform the most valuable agent, as it allays irritation of the peripheral nerves and nervous system generally.

DR. WHITEMAN was opposed to evacuation of the uterus. His practice is to leave the case to nature, except an emergency call for interference.

DR. GEORGE ROSS said that the subject always commanded a lively interest. He thought that, in the treatment of puerperal convulsions, a wrong idea was often made its basis. It is said that the blood is poisoned by a foreign substance—uræa, and this must be got rid of. This in itself is even yet an unproved hypothesis. At any rate, he believed that, convulsions existing, the primary object of the practitioner should be to allay the irritation of the nervous centres, independent of everything else; accomplish that, and the eclampsia will cease, and then you will have time enough to take steps for unloading the system and starting the action of freed kidneys. To allay this central irritation we must resort to narcotics, and especially morphia and chloral hy-

drate. On these principles, therefore, the employment of pilocarpine can only be looked upon as uncalled for, and in not a few cases actually dangerous. He agreed with Dr. McKeough, that it may be very useful in early conditions of albuminuria, or even after convulsions have ceased, but not as a treatment of the eclamptic paroxysms. He would draw attention to a point often omitted in text-books, viz., that prodromata of convulsions—early uræmic symptoms—should always be looked for and actively treated. These consist most frequently in severe headache and repeated vomiting. They can often be completely relieved by narcotic treatment, and convulsions prevented, whereas depleting measures do little good, except assisted by the narcotic. As regards emptying the uterus, it has been his practice in a number of cases to treat by opium, etc., and take no step to hurry the confinement. He has never had reason to regret this course.

DR. GRANT agreed with Dr. Ross that it is important to watch puerperal cases, with a view to preventing the serious complication of convulsions. He trusts, in cases with slight œdema, to a course of potash, especially the bitartrate. He is in favor of the narcotic treatment of the actual eclampsia.

DR. DAVIDSON objected to the use of pilocarpine on account of the pulmonary dangers. He saw one case where great lividity was produced, with marked frothy exudation in the bronchi.

DR. THORBURN spoke of the value of pilocarpine in cases of general anasarca, especially those of a more chronic kind. He considers its use in puerperal cases somewhat problematical. The treatment of puerperal convulsions, he thinks, should not be uniform, but must be based upon the nature of the probable exciting cause.

DR. MCKEOUGH, in reply, said he claimed no special value for the drug, but brought the cases before the Association as observations of some interest, and he was pleased with the discussion they had elicited. He thought his cases were all of uræmic origin, as such cases generally are.

DR. OSLER then read a paper on *The Clinical and Pathological Relation of the Cæcum and Appendix*.

DR. WHITEMAN, of Shakespeare, read a paper on *Pelvic Peritonitis and Pelvic Abscess*.

The following papers were read by title:

Retroversion of the Gravid Uterus, by Dr. W. B. Geikie, of Toronto.

Microorganisms in Puerperal Septicæmia, Prophylaxis and Treatment, by Dr. S. T. Johnson Alloway, of Montreal.

Field Hospitals and Climate in the Northwest Territory, by Dr. Nattreas, of Toronto.

Phlegmasia Dolens, by Dr. A. H. Wright, of Toronto.

Inebriety, a Disease the Result of Physical Causes, by Dr. Hepben Teft, of Guelph.

At the concluding general meeting the report of the Nominating Committee was received and adopted, and the following were elected

OFFICERS FOR THE ENSUING YEAR:

President-elect.—Dr. Holmes, of Chatham.

Vice-President for Ontario, Dr. Sloan, of Blyth; *for Quebec*, Dr. Colin Sewell, of Quebec; *for Nova Scotia*, Dr. Wickwire, of Halifax; *for New Brunswick*, Dr. Earle, of St. John; *for Manitoba*, Dr. Brett, of Winnipeg.

General Secretary.—Dr. James Stewart, of Montreal.
Treasurer.—Dr. Sheard, of Toronto.
Quebec was chosen as the *next place of meeting*.
The Association then adjourned.

AMERICAN GYNECOLOGICAL SOCIETY.

Tenth Annual Meeting held at Washington, September 22, 23, and 24, 1885.

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 361.)

WEDNESDAY, SEPTEMBER 23D.—SECOND DAY.

MORNING SESSION.

THE PRESIDENT, DR. WM. A. HOWARD, of Baltimore, read the Annual Address. It was entitled

TWO RARE CASES IN ABDOMINAL SURGERY.

He held that all cases, whether successful or not, should be put on record, in order that the knowledge of such affections might be increased. The paper described two rare cases of exceptional interest, in which the doctor was completely baffled in the diagnosis, and declined to make one.

Case I.—S. H., negress, aged 24 years, married, presented herself at the Dispensary of the University of Maryland April 20, 1882. She was seen by the clinical assistant and the following notes made: Menstruation appeared at the age of fourteen and had been regular and normal. She was the mother of five children, the youngest of whom was two months old. She had never had a miscarriage. Some days after delivery she noticed an enlargement in the lower portion of the abdomen, which gradually extended in the middle line until it reached the umbilicus, and was attended with bearing-down pains and frequent micturition. On examination, fluctuation was well marked all over the abdomen, with decided resonance about the umbilicus. There was dulness on percussion and bulging in both flanks. Six weeks later she returned to the dispensary, and at this time the resonance at the umbilicus had disappeared and the umbilicus projected. I saw her for the first time two weeks after this observation was made. At this time she was quite sick, the temperature being 102° F., the pulse 132, and the respiration 32 per minute. Examination showed the presence of fluid in the pleural sac. There were also some crackling râles heard through the lung. The abdomen was as large as at seven months' pregnancy, and was remarkably protuberant in the centre. There was complete dulness over the entire abdomen, not changed by change of position. There was no evidence of a solid tumor, but it had every appearance of a simple unilocular cyst. Vaginal examination showed the uterus well in front of the tumor, and the sound gave a measurement of two and three-fourths inches.

The question which arose was as to the nature of this tumor. Was it ovarian? The extreme infrequency of ovarian tumors in the negro race was against this view. The rapid growth of the tumor was also opposed to this view. The next affection considered was fibro-cystic tumor of the uterus, this is exceedingly rare. The speaker had seen but one such case in the negro. In

that case the cyst was filled with pus. The patient was operated upon, with a fatal result. Such tumors are rare before the age of thirty-six. They usually develop slowly. There was no menstrual disturbance in this case. For these reasons fibro-cystic tumor was excluded.

Was it a parovarian cyst? These usually develop even more slowly than ovarian cysts. They are usually flaccid. They contain a thin liquid, are comparatively rare, and do not affect the general health. This was therefore excluded.

It was certainly not a case of simple ascites, but was it a case of encysted dropsy, so called, of the peritoneum resulting from simple peritonitis? This is an extremely rare affection, and in the early stages there are symptoms of constitutional disturbance, the abdomen is not prominent, and often it is flaccid. Encysted dropsy was excluded.

Finally, on June 20th, I aspirated the cyst under antiseptic precautions. The fluid which escaped was of a light straw color, and coagulated as speedily as blood. After aspiration, large masses were readily felt through the abdominal wall. The character of the fluid corresponded with that which is said to characterize fibro-cystic tumors of the uterus. The speaker had, however, seen other cases which showed that the character of the fluid was not pathognomonic. In one case of abdominal tumor, fluid was removed which did not coagulate even after being kept for many days. The abdomen was subsequently opened and a fibro-cystic tumor found. In a case of supposed ascites in a man, aspiration was performed, and the fluid removed coagulated quite rapidly.

After the cyst was aspirated, the patient did well for three days, when acute peritonitis supervened, and the patient died on the seventh day.

At the autopsy, a mass as large as a child's head was found in the abdomen. This consisted of omentum, the transverse colon, and small intestine bound together by inflammatory exudation. The inflamed peritoneum was invaded everywhere with miliary tubercles, there was no ovarian or uterine disease. There was some tubercular ulceration of the small intestine, the other abdominal organs were not affected. The pleura was also invaded with scattered miliary tubercles. In both lungs there were some tubercles.

This then was a case of encysted tubercular peritonitis simulating ovarian or parovarian cyst. The failure to recognize the true condition was ascribed to want of attention to the previous history of the case and the recognition of the fact that there had been free fluid in the peritoneal cavity at the first visit.

He then referred to the few similar cases which had been reported. In these cases the disease had appeared, as a rule, under the age of twenty-five years. It has progressed rapidly, the length of time varying from six week to eight months.

Case II.—F. R., aged 24, was admitted to the hospital in July, 1883. She claimed to belong to the colored race, but looked much like a white woman. She had been married one year, but had never been pregnant. There was no evidence of uterine disease. The abdomen was much enlarged, measuring forty-seven inches just below the umbilicus. Vaginal examination showed the uterus pushed forward by a sac containing fluid.

There was, apparently, an immense unilocular sac. This had been first noticed seven or eight years before. The increase in size had been gradual, and unaccompanied with pain.

As to diagnosis, ascites was dismissed both by the physical signs and the absence of any cause to account for such a condition. The length of time which the affection had lasted was against its ovarian origin. There are, however, exceptional cases in which an ovarian tumor may be present for a number of years, even as many as twenty-four, without requiring operation. The age of the patient, the length of time which the cyst had been present, the marked fluctuation, and the flaccid nature of the tumor, were in favor of a parovarian cyst. There was one point against this diagnosis, and that was that although the cyst was flaccid, it could not be compressed below the umbilicus. Fibro-cystic tumor was readily excluded. The history of the case was against the existence of encysted peritonitis. The balance of evidence seemed to be in favor of an ovarian or parovarian cyst.

On July 13, the operation was performed. It was made largely with the view of exploration. The peritoneum was found much thickened, and closely adherent to the sac. With difficulty the adhesions were separated for a short distance, and the cyst presented the appearance of an ovarian cyst. A trocar was introduced, and forty pounds of a greenish, viscid fluid removed. An endeavor was made to enucleate the cyst, but the adhesions were so extensive that this could not be accomplished. The cyst was then incised to the extent of the abdominal opening, and on looking into it, it appeared to occupy the whole abdominal cavity, stretching tightly over the spinal column. A small portion of the wall of the cyst was removed, a drainage tube introduced, and the opening closed with stitches. Peritonitis ensued and the patient died. A post-mortem was made, but owing to the physician's unavoidable absence, was not sufficiently full to throw any more light upon the case than had been obtained at the operation. The nature of the cyst, therefore, remained unsettled.

DR. EMMET, of New York, said a few words in regard to the difficulties of diagnosis. It seemed to him that the older he gets, and the more experience he has, the more uncertain he is about diagnosis. While in yesterday's discussion he did not favor opening the abdomen, yet, when a woman has an abdominal tumor he favors opening the abdomen to make the diagnosis, because she has something which must come out. As regards rapidity of development, we cannot depend on that. He has seen parovarian cysts develop in six weeks, and recover after operation. He has also seen cases which had lasted twenty-three years. He has twice opened the abdomen expecting to find an ovarian cyst, and found a fibro-cyst. About two years ago he saw a case in which he could not make a diagnosis. The abdomen was opened, and he saw just such a cavity as had been described. It seemed as if a cyst had at some time ruptured, and its contents had become encysted. The cavity was left open, frequently washing it out. In six weeks the cavity had greatly diminished. Unfortunately, the patient died at this time from strangulation of the small intestine. There is no set of symptoms which we can say belong exclusively to a certain condition.

DR. WILLIAM GOODELL, of Philadelphia, said that

the President seemed to have been somewhat ashamed that he did not make the diagnosis in the first case. He could tell him that he has removed tumors the nature of which he does not know to this day. In one case he worked for forty-five minutes before he found out what the tumor was. It turned out to be two ovarian tumors which had coalesced, including the uterus between them. He felt more and more the necessity of performing the exploratory operation. For it is impossible to make a correct diagnosis in many of these cases. To illustrate the difficulties of diagnosis, he reported a case which he saw some time ago. A lady presented herself with a solid tumor of the abdomen. There were also metrorrhagia and menorrhagia. He diagnosed a fibroid tumor of the uterus, but the growth was so mobile as to suggest the possibility of a fibroid tumor of the ovary, and he so noted it in his record book. He advised against an operation. The lady went North, and her sufferings became so great that she consulted a distinguished gynecologist, desiring an operation. He wrote to him, asking his diagnosis. He told him what he thought of the case. He performed the operation, removing a large fibroid of the ovary, there being no adhesions.

DR. T. A. REAMY wished to put on record another case in which a fatal result followed aspiration in tubercular peritonitis. The patient was a man, but the tumor presented all the characteristics of an ovarian cyst. The patient died the second day after the removal of the fluid.

There is great difficulty in the diagnosis of these abdominal tumors. In reference to the coagulability of fluid from other sources than fibro-cystic tumors of the uterus, he wished to say a word. In a case which he saw some years ago, he tapped a woman and obtained a large quantity of pure blood. This coagulated at once. The patient recovered, and is still living. His inference is that this was a case of tumor of the omentum.

DR. HOWARD said, in closing the discussion, that it is agreed by all that cases often occur in which the diagnosis cannot be accurately determined, but in the majority of cases he thinks a correct diagnosis is made. The fact that he was able in these cases to eliminate so many of the ordinary conditions which give rise to these tumors, shows that we have the means of making the diagnosis. The object of the paper was to give an accurate account of this case, in order that it might assist others in cases of obscure abdominal tumors.

THADDEUS A. REAMY, of Cincinnati, then read a paper on

THE CARE OF THE PERINEUM DURING LABOR.

He referred to the various opinions which had been expressed on this subject. There is a general agreement as to the importance of preserving the perineum. In certain cases, however, from anatomical and pathological conditions, laceration is almost inevitable. He spoke of the various methods which had been proposed, dividing them into two general classes, those which aimed to support the perineum and those which were used with the object of retarding the progress of the head. There is one class, numerically small, who believe that the perineum should be let alone. The method about to be described he had adopted several years ago, and it had given him much satisfaction. He

was persuaded that he had saved many perineæ through its use. It was recommended for primiparæ and others where the structures were greatly imperilled. During the early part of the second stage the patient is allowed to assume any position she prefers, but when the head begins to distend the perineum, the patient is placed across the bed with the limbs in the lithotomy position, with the exception that the knees are kept close together. This is important. The limbs are held in this position by two assistants. A piece of muslin or a towel, ten inches wide, and forty or fifty inches long, is carried around the buttocks of the patient and over the hemisphere produced by the bulging perineum with the upper edge on a level with the fourchette, and the ends given to the assistants. They are instructed to make traction, during the pain, in the manner that the accoucheur may direct. The bandage must be applied smoothly. The direction of the force may be made in any required direction. Care must, however, be taken that the pressure is equably distributed, and that the assistants do not simply pull on the middle or posterior part of the bandage, while the anterior portion is left lax.

In order to show that this procedure is based on good anatomical grounds, the speaker next referred to the anatomy of the perineum, illustrating his remarks with diagrams. According to the old descriptions of the anatomy of this region it was considered that the muscular fibres decussated in the part between the vagina and rectum. Recent observations show that this is not the case, but that the fibres simply meet, and a laceration of the perineum divides no muscular fibres transversely, with the exception of those of the transverse perinei. The fibres are simply separated. When the sphincter ani is divided, its fibres are, of course, divided transversely. The perineum is prevented from lacerating by the protection afforded by the tissue below and the integument. The bandage used in the way described affords a supplementary perineum, as it were. By keeping the limbs in the position indicated, nature is able to supply tissue for the relaxation of the perineum. When the perineum is bulged the lateral and posterior sulci disappear, and the perineum with the advancing head forms almost a hemisphere. The towel is in contact with every part of this hemisphere. The advance of the head may be retarded by making traction on the towel. Where it is accessible, a narrow bed may be used with advantage, the assistants taking their positions near the head of the patient.

The use of this bandage avoids any tendency to exciting expulsive efforts from reflex irritation of the perineum, as is sometimes seen where the fingers are used. It is comfortable to the patient, and does not cause more exposure than other methods. The bandage may be kept on until the shoulder is delivered, thus avoiding rupture from this cause. In order that this method shall be successful, it is important that every detail shall be carried out with painstaking care.

Should a rupture occur, the immediate operation should be resorted to.

AFTERNOON SESSION.

DR. WILSON, of Baltimore, said that all authorities agree that the perineum should be supported, but there is a great variety as to the way in which this support

should be made. Dr. Reamy's method appears to be very practical, and it has the advantage of leaving the operator free to watch the case.

DR. MANN, of Buffalo, thought the method of Dr. Reamy seemed to be a good one in a certain proportion of cases, but he is sure that he has seen some cases where it would have been of no avail. The worst ruptures that he has seen have occurred in cases where, at the acme of the expulsive pain, the woman has torn herself from the accoucheur, and when he comes to examine he finds the head delivered and the perineum torn. In such cases, the use of chloroform will of course obviate the difficulty. Another objection to the method is that it requires more assistance than can always be secured.

DR. TABER JOHNSON had made a few investigations in regard to the necessity of supporting the perineum at all, and he has found that perhaps more lacerations of the perineum occur in the practice of physicians who support the perineum, than in the practice of midwives, who do not support the perineum.

DR. CHADWICK, of Boston, thought the term supporting the perineum a misnomer; what we mean is retardation of the child's head until the tissues can be sufficiently stretched to permit the passage of the head. He always insures the slow exit of the head, and does not permit it to escape during a pain. The method which he always employs, is to have the patient on her side, and then pass one arm over the thigh, and then by interlocking the fingers he can make any desired amount of pressure. He holds the head back until the perineum is sufficiently stretched.

DR. ELWOOD WILSON, of Philadelphia, said that he had tried every method suggested for the support of the perineum, with the exception of the one just described by Dr. Reamy. His usual plan is simply to instruct the woman to keep her mouth open during a pain.

DR. REAMY, in reply to the statement of Dr. Chadwick, that supporting the perineum was a misnomer, said that the word "support" means protection or succor, and he used it in this sense. The number of assistants required has been objected to, but the importance of preventing rupture of the perineum during the first labor is so great, that even if two or three skilled assistants are required, he thought they should be employed. Skilled assistants are, however, not required. With this method the patient cannot get away. An objection to the method referred to by Dr. Chadwick is, that the pressure is not made over the perineum, but over the head, and in the efforts to retard the head extension may be produced, causing delivery of the head in a bad relation to the axis of the outlet. The method he has mentioned obviates this. By this method the head can be retarded as much as may be desired.

He called attention to a clinical picture, familiar to all, in which the head has been permitted to remain pressing on the perineum for from half an hour to two or three hours, until the perineum is stretched to the degree described in the paper. The tissues are then in a state of beginning necrosis and exceedingly friable. Even in such a case the use of the towel or bandage lessens the perils of the perineum, and the perineum will often be saved where otherwise it would have been torn. It cannot be supported by the hand under such

circumstances. If it is desired, the forceps may be applied with the bandage in position.

DR. EDWARD JENKS, of Detroit, then presented a

REPORT OF A CASE OF CÆSAREAN SECTION.

He described the following case which he had seen in consultation: The patient aged 27, had given birth to one child five years previously without special difficulty. Two years later she received a fracture of the ilium from a building falling on her. She was taken in labor at three o'clock in the morning. The physician in attendance finding some difficulty, tried to apply the forceps. He got one blade on without difficulty, but could not, after several trials, introduce the second blade. He sent for assistance, and the attempt to apply the forceps was again made without success. The cause of difficulty was a projecting shelf of bone at the seat of fracture. Another physician was called in and the forceps were again tried. It was then decided to perform craniotomy, which was done, but still the head could not be made to descend. Dr. Jenks was then sent for; he tried to apply the forceps to make sure that they could not be applied, and failing, tried the cephalotribe, with no better success. It was then decided to perform abdominal section. This was performed at two o'clock that night, twenty-four hours after labor began. The woman appeared to be in good condition. The incision was made through the abdominal wall and the uterus opened. The placenta was attached directly under the incision and there was alarming hemorrhage, which, however, was quickly checked by the rapid delivery of the fœtus. The edges of the uterine incision were brought together by silk sutures, and the abdominal wound closed. The patient did well until three days after the operation, when she suddenly died. It was subsequently learned that the nurse had, in disobedience to orders, temporarily left the room, and in her absence the patient got out of bed. She complained of feeling something give way and experienced severe pain, and died in a few hours.

DR. SKENE, of Brooklyn, considered that the chances of the patient are lessened by undue efforts at delivery by the forceps. He thought that this would have been a good case for the performance of laparo-elytrotomy. It is impossible to sacrifice the child by that operation, if it is performed in good time. He could hardly imagine any case where craniotomy should be performed, except possibly where the head is so engaged in a small inferior strait that it can be delivered in no other way, and even then he was not certain that the Cæsarean section would not be the best operation.

DR. JENKS said that the operation of laparo-elytrotomy was considered, but it did not seem to be an easy operation under the circumstances. If it had not been for the unfortunate accident in this case, he thought that the woman would have recovered.

DR. ELWOOD WILSON, of Philadelphia, offered some

REMARKS ON THE USE OF TARNIER'S FORCEPS.

At the meeting in 1881 he had read a paper in which he offered a number of objections to the use of these forceps. His objections had been based on theoretical grounds. The object of the present communication was to report nine cases in which he had used the forceps

with decided advantage to the patient. He had, therefore, modified his views. A detailed account of the nine cases in which the forceps had been used was then given. The instrument used had been Dr. Howard's modification of Tarnier's forceps.

DR. NEALE, of Baltimore, exhibited his modification of the Tarnier forceps, which consisted in adapting the Tarnier principle to the Simpson forceps.

DR. MANN said he had used the Tarnier forceps for the past two years in a number of cases, with, in the main, satisfactory results. In one case he had a little misfortune which might not have happened with other forceps. It was a case of deformed pelvis in which the Tarnier forceps were applied. The child was finally delivered and the woman made a good recovery. The child was, however, injured by the forceps. The outer edge of one orbit had been crushed in, destroying the eye. The child was living at the time of birth, but subsequently died.

THE PRESIDENT said that, so far as he knew, he was the first one to use the Tarnier forceps successfully in America. He thought that in cases of occipito-posterior positions, the application of other forceps interferes with the rotation of the head, but with the Tarnier forceps the head is free to rotate.

EVENING SESSION.

At the business meeting, the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Thaddeus A. Reamy, of Cincinnati.

Vice-Presidents.—Dr. Theophilus Parvin, of Philadelphia, and Dr. George J. Engelmann, of St. Louis.

Secretary.—Dr. Joseph Taber Johnson, of Washington, D. C.

Treasurer.—Dr. Matthew D. Mann, of Buffalo.

Other Members of the Council.—Drs. Frank P. Foster, B. B. Browne, J. C. Reeve, and R. B. Maury.

New members were elected as follows: Dr. J. B. Hunter, of New York; Dr. Charles Jewett, of Brooklyn; and Dr. W. H. Parish, of Philadelphia.

The next meeting will be held at Baltimore, Md., September 21, 22, 23, 1886.

THURSDAY, SEPTEMBER 24TH.

MORNING SESSION.

DR. R. STANSBURY SUTTON, of Pittsburg, read a paper on

A MODIFICATION OF EMMET'S CERVIX OPERATION IN CERTAIN CASES, WITH A CASE.

He stated that, while the operation was original as far as he was concerned, he did not claim to be the only one who had performed it. Cicatricial tissue is found to a greater or less extent in every lacerated cervix which has lasted for any length of time. This is especially apt to be the case where nitrate of silver has been used in the treatment of the cervix. The hardened tissue may be present in both lips or it may be limited to one lip.

The case reported was operated on June 5, 1885. She was the mother of several children. There was a double laceration of the cervix. The tissue of the anterior lip was hardened and hypertrophied, and the lip was convex from side to side and also from before

backward, so that, by the ordinary method of operation, correct coaptation could not be effected. The tissue of the anterior lip was as hard as cartilage. Ordinary denudation of the posterior lip was sufficient, and this was made, leaving the strip of mucous membrane somewhat wider than usual. The cicatricial mass involving the anterior lip was removed from border to border, completely denuding this portion of the cervix. The parts were then brought together in the usual way, and the result was excellent. The cervical canal readily admits a sound and the woman menstruates without difficulty.

He thought that there were cases in which nothing short of the complete removal of the cicatricial tissue will be sufficient.

DR. WM. GOODELL, of Philadelphia, said that he had resorted to this device on more than one occasion. He had done another thing on a few occasions. He had outlined the strip of mucous membrane to be left and dissected it from the tissues below, leaving it united at its base. The indurated tissue has then been removed and the flaps brought together. The result has been good. He had never as yet denuded both surfaces, although he understands that it has been done by some of the gentlemen.

There is a point on which he should like to hear the opinion of the Society. Sometimes the Nabothian glands are enlarged and are cut through in the operation, and it has been his rule to dissect these out, but sometimes this leaves an attenuated cervix. He should like to hear what the members have to say as to the method of dealing with these enlarged glands.

DR. SKENE, of Brooklyn, said that the term cicatricial tissue is incorrect. This is not cicatricial tissue. How could there be cicatricial tissue below a mucous membrane where there has been no damage? It is a true sclerosis, a hypertrophied, indurated tissue. This is, however, simply a question as to name. Much can be done to get rid of this tissue by preparatory treatment. But this often requires too much time, and then such an operation as that proposed by Dr. Sutton comes in. While speaking of preparatory treatment, he would say that enlarged Nabothian glands should be disposed of either by preparatory treatment or at the time of the operation. His plan in the cases referred to by Dr. Sutton has been to do a preliminary operation, which consists in removing a transverse, wedge-shaped piece out of one or both lips of the cervix, as the case may require, and then bringing the surfaces together with silk stitches. After the first day the patient can go about, and the sutures are removed in the course of a week or ten days. After the size of the cervix is reduced he performs the ordinary operation. He has done both operations at one sitting, but he prefers to do them separately. One objection to the method of Dr. Sutton is, that it leaves cicatricial tissue.

DR. GEORGE J. ENGELMANN, of St. Louis, has found the condition referred to very constantly. He now cuts deeply and removes the indurated tissue; and in old and severe cases it is impossible to retain the strip of mucous membrane. He, therefore, removes it. He has done this on both lips, and on some occasions has had complete union, but the passage of a probe serves to keep a canal open. For the last few years he has paid no attention whatsoever to this central strip. He

now inserts a single strip of the carbolized silk thread which he uses in closing the opening. A probe passed a few times after the removal of the sutures will dilate the opening. The result of this operation has been good. The union, the involution, and the restoration of the health of the patient have been perfect. This operation has been done only in severe cases, and, as far as I know, none of these patients have conceived.

DR. M. D. MANN has tried the method described by Dr. Sutton. In only one case was it necessary to denude both surfaces. To keep a patulous canal, he introduced a piece of small drainage-tube. The case did well. Where there are diseased Nabothian glands, and there is plenty of time, he prefers to treat the mucous membrane before performing the operation. Where there is little time, he excises the follicles. So far, the result has been good. He has, however, never done this on both lips.

DR. BAKER, of Boston, thought that the retention of the mucous membrane is important, and that the method of Dr. Sutton, by leaving cicatricial tissue on one side of the canal, will tend to make the canal tortuous. As a rule, if the patient is properly prepared, it will not be necessary to remove this hypertrophied tissue. If this is not done, Emmet's operation can still be performed in the way described by Dr. Skene. He, however, prefers to do both operations at the same time. It is then not necessary to introduce a suture to bring the transverse incision together. Great care should be exercised in the introduction of substances between the two flaps.

THE PRESIDENT, DR. HOWARD, of Baltimore, said that, a few weeks before the death of Dr. Sims, he saw Dr. Harry Sims perform this operation in the presence of his father. He inserted a glass tube which fitted so loosely that it had to be retained with a plug of cotton.

DR. SKENE thought that, if the denudation was practised on both sides, stenosis would certainly follow.

DR. WILLIAM GOODELL, of Philadelphia, then read a paper on

INFLAMMATION OF THE PAROTID GLANDS FOLLOWING OPERATIONS ON THE FEMALE GENITAL ORGANS.

He referred first to the close relation existing between the salivary glands and the genital organs of the adult as shown in mumps and other conditions. Parotid bubo seems particularly liable to follow ovariectomy where septicæmia has taken place. He had seen parotid bubo once in 153 cases of ovariectomy. This was in a greatly emaciated woman, from whom a tumor weighing eighty pounds was removed. The patient had been twice tapped, once six weeks before the operation. The second tapping was followed by septic poison, and the operation was performed as a last resort. The patient did well until the ninth day, when the left parotid gland began to swell. It suppurated and was opened. The patient finally died on the twenty-second day after the operation.

There is a transference of irritation to the parotid glands in which there is no evidence of septic poisoning. Of this the author had seen three instances: twice after ovariectomy and once after oöphorectomy. In these cases the parotid complication did not influence the progress of the case. Not one of these ended fatally. He re-

garded the affection of the glands as sympathetic, and not symptomatic.

Within a short time he had operated on a lacerated cervix. The operation was followed by free hemorrhage, and in the second week the parotid glands began to swell. This was succeeded by hysterical trismus which lasted for some time. The patient recovered.

DR. SUTTON said that, out of twelve ovariectomies, he had lost one patient, and she died with the complication referred to in the paper. The case did well until convalescence was reached, when one parotid gland began to swell. This was followed by swelling of the other gland. The temperature varied one or two degrees from the normal. There was slight diarrhœa, no tympany, and no soreness. A number of rose-colored spots were found about the second week over the abdomen and arm. In the third week she became much worse. The glands diminished in size, but the temperature ran up and she died. He regarded the case as septicæmic. Others who saw the case considered it a well-marked instance of typhoid fever.

DR. J. T. CHAS. JOHNSON had seen this complication in one case of ovariectomy. On the third or fourth day, swelling of the parotid appeared. There were the rose-colored spots referred to by Dr. Sutton. There was some fever, and the patient died on the sixth day.

DR. MANN referred to three cases which he had seen. The first was a case of ovariectomy. There were distinct symptoms of septicæmia, and the patient died before the glands suppurred. The second case was one in which he removed all the uterus above the internal os, and also the ovaries. At the end of the first week, one gland became swollen. There was little fever. The patient made a good recovery. The third case was a boy who had received a penetrating wound of the abdomen. Enlargement of the glands followed, but he made a good recovery.

DR. EMMET added his experience of two cases. Once it followed an operation for lacerated cervix, the patient recovering. Once it followed an operation on a small vesico-vaginal fistula, the patient dying. This is the only time he has seen death follow this operation.

DR. BAKER had had the complication follow Tait's operation, but the patient recovered.

DR. REAMY had had two cases. One was after Tait's operation. The glands did not suppurate, but the patient died the seventh day after operation. The second was a case of supravaginal hysterectomy, in which the uterus and both ovaries were removed. The left gland became much enlarged, but did not suppurate. The patient recovered.

DR. JAMES R. CHADWICK, of Boston, then read a paper on

PERISTALSIS OF THE GENITAL TRACT, AND A NEW THEORY TO EXPLAIN RELAXATION OF THE VAGINAL OUTLET DURING LABOR.

Some time ago he was called to see a primipara in labor. He found the os slightly dilated and the vaginal outlet quite rigid. Returning two hours later, the outlet was found much relaxed, although the head had not escaped from the uterus. On another occasion, a woman with a bleeding fibroid tumor consulted him. The examination revealed quite a small outlet. Ergot was given to check the bleeding. Later the patient returned

and the outlet was found much relaxed. This had occurred coincident with the occurrence of uterine contractions, and the forcing down of the tumor. Further investigation of this subject had led him to the conclusion that there is a peristaltic action of the lower portion of the genital canal, as well as of the Fallopian tubes, and that it is to this that the relaxation of the outlet is largely due.

DR. GOODELL said that a fact which seems to bear out this idea is, that when after labor or an abortion a piece of membrane or of placenta is retained, the cavity of the cervix is found funnel-shaped, showing that the uterus is trying to force out the retained substance.

DR. THEOPHILUS PARVIN, of Philadelphia, reported a case of

FACIAL PARALYSIS IN THE INFANT FROM THE USE OF THE OBSTETRIC FORCEPS.

The case was a well-proportioned woman, aged 30 years, who had been in labor thirty-two hours, the first stage lasting twenty-four hours. The only difficulty appeared to be want of strength in the uterine contractions. The forceps were, therefore, applied, and the child delivered. The following day it was observed that one side of the face was paralyzed, this was especially noticeable when the child cried. There was no evidence of bruising from the forceps. The paralysis disappeared in ten days without treatment.

The literature of this affection was then referred to, and the reported cases given. The writer referred to cases of spontaneous facial paralysis occurring in labor, and pointed out the means of distinguishing between this palsy and that caused by the forceps.

In one case that has been reported, there was double facial palsy caused by the forceps, but usually it is only one side that is affected. So far as statistics permit a conclusion, the side affected is that which is towards the posterior portion of the pelvis. Thus in a vertex presentation, and left occipito-anterior position, the palsy will be of the left facial nerve. The explanation of this is probably found in a lateral obliquity of the fetal head, and indicates that the parallelism of the fetal head planes and the maternal pelvic planes is not as constantly present as some obstetric teachers have asserted.

While spontaneous recovery is the rule in facial palsy caused by the forceps, this does not always occur, and the palsy remains permanent. Therefore, if recovery has not taken place in one or two months after birth, appropriate treatment should be begun.

DR. ELWOOD WILSON, of Philadelphia, had seen this accident a number of times, both in his own practice and that of others. Recovery, as a rule, has occurred spontaneously.

DR. GOODELL had seen such cases, and in every instance the paralysis has been on the right side. He attributes this to the predominance of the left occipito-anterior and the right occipito-posterior positions. Under such circumstances, one blade of the forceps would make pressure on the nerve.

DR. SKENE said that differential diagnosis between facial paralysis from injury and facial paralysis from apoplexy is of importance, for apoplexy is not uncommon in newborn children. Usually the diagnosis is readily made, but difficulty occurs where there is facial paralysis

from injury associated with paralysis of the arm caused by violence in delivery. He recently saw such a case in consultation. In this case it was of great importance to complete the labor quickly, and the shoulder had been injured in delivery, so that there was facial paralysis and paralysis of the arm on the same side. At first there was no trace of contusion, but in a short time ecchymosis appeared and a favorable prognosis was given, which was verified.

DR. RICHARDSON, of Boston, said that in most of the cases that he had seen the paralysis had been on the right side. He had seen it occur once from the pressure of a bony tumor of the pelvis. He had seen it where the forceps were applied to the after-coming head.

DR. PARVIN, in concluding the discussion, said that so far as positive statements were made by those discussing the paper, they confirmed the statement he had made as probable, that the side of the face affected by palsy from the forceps was the posterior. The only other point to which he desired to refer was to emphasize the fact, that this palsy, though usually a simple thing, disappearing in a few weeks, in some cases is permanent, and therefore the importance of not being too positive in promising recovery.

The following papers were read by title:

The Genupectoral Posture in the Prolonged Nausea and Vomiting of Pregnancy, with Cases, by Dr. H. F. Campbell, of Augusta, Ga.

A Study of an Unusual Type of Puerperal Fever, by Dr. Fordyce Barker, of New York.

A RESOLUTION OF SYMPATHY.

A resolution expressing the sympathy of the Society with Dr. Albert H. Smith, in his sickness, was adopted.

The officers for the ensuing year were then installed, and the Society adjourned.

MEDICAL SOCIETY OF VIRGINIA.

Sixteenth Annual Session, held at Alleghany Springs, Montgomery Co., Sept. 15, 16, and 17, 1885.

(Specially reported for THE MEDICAL NEWS.)

(Continued from p. 356.)

THURSDAY, SEPTEMBER 17TH.—THIRD DAY.

MORNING SESSION.

DR. R. T. STYLL, of Richmond, presented the

TREASURER'S REPORT,

showing a balance of \$390.55.

A sum, not exceeding \$100, was voted to be used, if necessary, to retain legal council in the event of the State Board of Medical Examiners being sued, as threatened by a complainant who did not pass examination.

DR. W. D. TURNER, of Fergusson's Wharf, from the Committee to consider the subject, reported favorably on the petition for the enactment of a bill to regulate

THE PRACTICE OF PHARMACY.

DR. BEDFORD BROWN, of Alexandria, read a paper on the

TREATMENT OF LACERATIONS OF THE OS AND CERVIX UTERI, WITHOUT SURGICAL OPERATION.

Emmet's operation, though valuable, is sometimes dangerous. An experience with about twenty cases

during the past eleven or twelve years convinces the author that this large class can be relieved by a simple, painless, safe, and easy method of treatment by any intelligent practitioner, without resort to surgical operation, and by means of local treatment alone. The character of his cases has varied from a mere fissure to the most severe laceration. Sterility was an invariable feature. Many cases were complicated with cellulitis, localized peritonitis, subinvolution, metrorrhagia, displacement, proctitis, etc. The general health was impaired in almost every case. There were peculiar neuralgic pains in all those nerves coming within the circle of sympathy of the exposed and lacerated nerves of the os uteri. Thus, the great lumbar plexus manifested its sympathies in the form of a constant aching pain in the base of the sacrum. Ovaralgia on the side of the injury, or on both sides, if the injury was double, was almost invariable. In a few cases the development of sciatica indicated reflex sensation on the part of the sciatic nerves. Neuralgia of the crural nerves and their branches was common. These pains extended to the patella, and even down to the dorsum of the foot.

Dr. Brown has healed, by first intention, several cases of laceration in the acute stage by means of absolute quiet, disinfection, and cleanliness. If lacerations fail to heal by first intention immediately after labor, they never heal spontaneously by second intention. Local treatment then becomes necessary. Dr. Brown examines the womb for lacerations, etc., immediately after the discharge of secundines in each case of labor; and, if found, he begins a systematic course of treatment after the first twenty-four hours, with a view to absolute disinfection and cleanliness. Warm douches of borax, boracic acid, and carbolic acid solutions are gently used two or three times daily, and the patient is kept in the recumbent position for two weeks. If healing does not occur by that time, it does not occur afterwards spontaneously. In eight or ten weeks later, in such cases, he proceeds to secure healing by the second intention. For this purpose he has used carbolic acid, chromic acid, Battey's solution of carbolic acid and iodine, Churchill's tincture of iodine, solid nitrate of silver, and even nitrate of mercury, but without favorable results. He then adopted graduated solutions of crystals of nitrate of silver, with excellent results. Solution No. 1 is as follows:

R.—Argenti nitratis, cryst. ʒss.
Aque destil. fʒj.—M.

This solution is to be applied to the interior of the cervical canal freely, down to the os internum, as the cervical canal is always involved in the rent and is left in a diseased condition.

Solution No. 2 is:

R.—Argenti nitratis, cryst. ʒiiss.
Aque destil. fʒj.—M.

This solution is to be applied with a camel's-hair brush freely over the entire external surface of the os and cervix, including the fissure of the laceration, until a uniform white coating is formed, thick and tenacious, almost resembling a coat of paint. This gives immediate protection to the super-sensitive extremities of the exposed nerves and tender granulations, and acts as a sedative

application, which allays irritation, redness, inflammation and engorgement rapidly, and stimulates a new vital action and healthy growth of granulations, which fill up the fissures or cavities of the laceration, and accomplishes the healing of the wound by second intention. This coating, in the meantime, forms an imperious barrier to the further absorption of septic matter from the discharges, and in this way relieves pelvic cellulitis. The healing process and reduction of hypertrophy of the cervix and inflammation progress rapidly. The process of absorption is stimulated in a wonderful manner, and the process of involution is also promoted in proportion.

In simple fissure of the cervix extending through the mucous membrane and fibrous tissue only partially, solution No. 1 should be applied thoroughly in the groove of the fissure, so as to reach its very bottom, and thus induce healing from the lowest depths of the wound; otherwise the object will be defeated.

Solution No. 3 is:

R.—Argenti nitratis, cryst. ʒiiss.
Aque destil. fʒj.—M.

This solution is only to be applied to the external surface of the cervix, in the event of hypertrophy and induration remaining after the lacerations have healed; otherwise, if left in that condition, it forms a basis for the renewal of inflammation and reopening of the wound. After treatment, the cervix becomes naturally soft and normal in dimensions. The os is not only not contracted by the application, but returns to a perfectly healthy condition.

A great majority of females thus treated have borne from one to three children since, and have been entirely free of all uterine troubles. In three patients—one having borne three children, the second two, and the third one child after treatment—the os uteri in each case was found perfect as to softness, dimensions, and freedom from disease. Concealed fissures are often found after labor in the mucous membrane of the cervical canal, and cause an infinite amount of local disease, such as endocervicitis, hypertrophy of the adjacent tissues, inflammation of the fibrous tissues of the cervix, leucorrhœa, and often painful menstruation. A favorite locality for these fissures is at the internal os. The mucous membrane and submucous tissue are split through, and then the rent remains a source of trouble for years. The No. 1 solution of nitrate of silver reaches these wounds admirably, and will surely heal them from the bottom.

DR. GEORGE T. HARRISON, of New York City, then read a paper on

PUERPERAL SEPTICÆMIA, ESPECIALLY WITH REGARD TO PROPHYLAXIS AND ETIOLOGY.

Without a wound somewhere along the genital tract, puerperal septicæmia does not exist. In the puerperal woman, the conditions for the rapid development of the pathogenous fungi are most favorable. Contrary to general opinion, Gusserow has shown that there is no connection between puerperal sepsis and erysipelas, and that the micrococci of erysipelas cannot produce pathological changes identical with septic processes. The pathogenous fungi affect the organism immediately, while putrefactive germs do so indirectly by

their influence on decomposable matters always present in puerperal women. An autogenous or autochthonous infection is an impossible thing. The characteristic features of non-pathogenous infection are, (1) the late appearance of the fever; (2) the slight participation of the general condition; and (3) the existence of local morbid substrata.

The principles of prophylactic treatment consist in pure air for the lying-in woman, the careful avoidance of introduction of infectious matters into the genital passages, and the thorough disinfection of the genital tract. The physician's and midwife's hands, instruments, etc., should be disinfected before using about a puerperal woman. During the pregnancy, especially if there be any puerperal fever epidemic, the woman should frequently wash her external genitals with soap and water, and afterwards with boracic acid solution.

In tedious and complicated labors, where frequent examinations have to be made, or instruments used, injections are strongly indicated. Sometimes putrefactive decomposition of the uterine secretions occurs before labor ends. In such cases, complete the labor as speedily as possible, and thoroughly disinfect the genital tract by intrauterine injections of carbolic acid or mercuric bichloride. Wash the external genitals three or four times daily, and disinfect once a day by carbolic acid or mercuric chloride solution. Close all lacerations of the perineum and vagina under strict antiseptic precautions, as the continuous catgut suture. Iodoform dusted over the raw surface favors union. A powerful contraction and retraction of the uterus greatly help in securing immunity from invasion of putrefactive bacteria; hence the value of Credé's method in expelling the placenta.

DR. H. GREY LATHAM, of Lynchburg, read the report on

ADVANCES IN SURGERY.

He said that laparotomy is now an established operation for strictures of the intestines, strangulations, excision of organs not essential to life, etc. Do not wait too long in strangulations of the bowels; operate as soon as diagnosis is made out—as soon as vomiting sets in. Cut down so as to reach the cæcum at once. If this is distended, the obstruction is below; if it be collapsed or not tense, it is above. If the strangulated coil of bowel is gangrenous, resect it, and establish an artificial anus. When laparotomy is rejected, adopt Nélaton's enterotomy in the right iliac fossa. He stated as propositions, (1) that the best guide to the seat of an obstruction is not manual exploration, but visual examination, assisted, if necessary, by extrusion of the bowel; and (2) that no case of operation is properly concluded until an overdistended bowel is relieved of its contents.

In operations for hernia, invagination has been laid aside or neglected, and obliteration of the sac or closing the neck are the popular procedures. In operative treatment for rectal cancer, the following guides are said to be reliable: 1. If the finger cannot be passed beyond the disease, unless it is confined to the posterior wall, do not operate. 2. The growth can be removed at a somewhat greater height when the disease is confined to the posterior wall. 3. If, when the finger has passed beyond the disease, the bowel is movable on the

adjacent structures, generally speaking, the growth has not extended beyond the rectal walls, and the case is suitable for operation; but if the bowel feels hard, rigid, and firmly bound to the surrounding organs, the case is unfavorable for an operation. 4. Examine carefully the abdominal viscera, and if secondary deposits be suspected in the liver, no operation should be performed.

DR. RIVES TATUM, of Harrisburg, presented the report of the Committee on *Advances in the Practice of Medicine*.

(To be concluded.)

NEWS ITEMS.

NEW YORK.

(From our Special Correspondent.)

ITALIAN QUARANTINE.—The Italian bark *Excelsior* arrived here, a few days ago, from Marseilles, upon which when she was a few days out, a sailor died, of cholera. No other case followed. She now lies in the lower bay, and a rigid quarantine against her has been established.

THE FUTURE OF THE INTERNATIONAL CONGRESS excites little or no interest, and those who discuss the matter at all, uniformly express hope that the nation may be spared the disgrace of a slipshod meeting, where junketing shall be made to fill up the gaps caused by the withdrawal of the valuable scientific work which, under the original organization, was to have been contributed by the best men from all parts of the country.

MR. JOHN McCULLOUGH, the tragedian, who is now an inmate of Bloomingdale Asylum, is the victim of general paresis, and, from all accounts, the disease in his case is rapidly progressive. This is one of the examples that show the necessity for prompt asylum treatment; and, had the wiser counsels of his physicians prevailed, not only much misery, but a great deal of the money he squandered might have been saved. In no city of the Union do we find the stupid obstinacy of juries and popular ignorance regarding the treatment of the insane that prevail in New York. Rhinelander, who was discharged as sane, has been on the rampage since he obtained his freedom; and the last act of Prouse Cooper, the tailor, before going to Australia, was the purchase of six or eight pistols.

MORE RESIGNATIONS FROM THE CONGRESS ORGANIZATION.—Dr. William H. Welch, of Johns Hopkins University, has declined the Secretaryship of the Section of Pathology; Drs. T. A. McGraw, of Detroit, and J. R. Weist, of Richmond, Indiana, have declined Councilorships in the Section of Surgery; Dr. E. H. Hazen, of Davenport, Iowa, has declined the Councilorship in the Section of Otology; and Dr. E. L. Shurley, of Detroit, Mich., the Councilorship in the Section of Laryngology.

PUBLIC OPINION ON THE CONGRESS ORGANIZATION.—The committee has doubtless done just the work its manipulators set to its hands; but, whether its policy be voted wise or foolish, the denouement will show that the breach between the opposing parties is widened beyond

repair, and that the contending voices are dissonant beyond the hope of harmony.

The distinguishing guests who, soon after the June house-warming, stepped out and have since been standing in the rain, have not been asked to come in by the new proprietors; nor would they in the existing state of the house have accepted the invitation had it been extended. Their places have been or soon will be filled by others, worthy, indeed, but less renowned; and when the new list of officers and councilmen for the Ninth International Medical Congress shall be laid before the medical world, it will be destitute of many attractive features which characterized the original committee's issue in the early spring. Whether or not this strangely altered face will have charms of sufficient attractiveness to draw our foreign brethren across the sea remains to be seen; but if the signs of the times be not grossly misleading, the Congress of 1887 will not meet on American soil.—*Louisville Medical News*.

ASSOCIATION OF AMERICAN INSTITUTIONS FOR IDIOTIC AND FEEBLE-MINDED PERSONS will hold its ninth annual session at the Illinois Asylum for Feeble-minded Children, Lincoln, Ill., commencing Tuesday, October 6th, at 3 o'clock P. M.

Papers will be presented by Col. H. M. Greene, Dr. F. C. Carson, Dr. H. B. Brown, and others.

By resolutions of previous sessions, the following reports will be called for: "On Causation of Idiocy, etc.," "On Status of the Work before the People and Legislatures of the Various States," "On Development and Progress of the Institutions Represented," "Improvements in School Training and Hospital Care Introduced during the Past Year," "Clinical Reports of Special Cases."

CHOLERA IN SPAIN.—According to the reports received by the National Board of Health, there have been, from March 4 to August 16, 159,173 cases and 63,640 deaths.

THE NESTOR OF PHYSICIANS IN THIS COUNTRY is probably Dr. Neyron, Professor of Anatomy in Notre-Dame University, Indiana. He is ninety-four years of age, and was a surgeon in Napoleon's army during the Russian campaign, and was present at Waterloo. After the restoration he became a Catholic priest, and was an early missionary in the Northwest. Few men of seventy are so strong and active, and he is still able to conduct his classes.

DR. PAUL BÖRNER, Editor of the *Deutsche medicinische Wochenschrift*, and Editor and Publisher of the *Jahrbuch der Prakt. Medicin*, died recently in Berlin after a short illness, at the age of fifty-six years.

THE ANTWERP MEDICAL CONGRESS.—This Congress terminated its labors on the 30th of August, by a visit to the Hospital of the Stivenberg. In the full sittings it was resolved that "in the present state of relations between the peoples of Central Europe, land quarantines and sanitary cordons are useless and even dangerous measures; the fumigation of letters is useless." The majority of the Congress declared itself for the maintenance of maritime quarantines in seaports and at the mouths

of rivers. Such quarantines were also pronounced to be feasible and efficacious in Belgium.—*Lancet*, September 5, 1885.

NOTES AND QUERIES.

DEATH OF DR. ANDREW MURPHY.

At a meeting of the physicians of Parkesburg, Chester County, Pennsylvania, the following preamble and resolutions were adopted: *Whereas*, God in his Providence has removed from our companionship and counsel, Dr. Andrew Murphy, who for over half a century has honored and graced the ranks of the medical profession, therefore,

Resolved, that while we bow in submission to the decree of an all-wise Father, we wish to record our appreciation of the example which his life of generous and noble deeds affords, and our confident trust that through the blessed atonement, he has only been "called up higher" to a more exalted sphere of action, making the loss which the profession, the community, and his family have sustained, his infinite gain.

Resolved, that we hereby bear cordial testimony to the unvarying courtesy which ever characterized his relations with the profession, and to the esteem and regard in which he was universally held by its members.

Resolved, that a copy of these resolutions be presented to the family, with an expression of our sympathies, and be published in THE MEDICAL NEWS, the county papers, and *Medical and Surgical Reporter* of Philadelphia

(Signed.)

DR. EBER HUSTON,
DR. T. A. TAYLOR,
DR. E. V. SWING,
Committee.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING SEPTEMBER 26, 1885.

DUGAN, J. S., *Medical Director*.—Waiting orders.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 22 TO SEPTEMBER 28, 1885.

PROMOTIONS.

MCPARLIN, T. A., *Lieutenant-Colonel and Assistant Medical Purveyor*, to be Surgeon with rank of Colonel, to date from September 16, 1885.

IRWIN, B. J. D., *Major and Surgeon*, to be Assistant Medical Purveyor with rank of Lieutenant-Colonel, to date from September 16, 1885.

POPE, B. F., *Captain and Assistant Surgeon* with rank of Major, to date from September 16, 1885.

APPOINTMENT.

MORRIS, EDWARD R., to be Assistant Surgeon with rank of First Lieutenant, to date from September 17, 1885.

ADAIR, G. W., *Captain and Assistant Surgeon*.—Granted leave of absence for one month with permission to apply for one month's extension.—*S. O. 104, Department of Dakota*, September 18, 1885.

BUCKNELL, GEORGE E., *First Lieutenant and Assistant Surgeon*.—Ordered from Department of Dakota to Department of the East.—*S. O. 219, A. G. O.*, September 24, 1885.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING SEPTEMBER 26, 1885.

AUSTIN, H. W., *Surgeon*.—To proceed to Burlington, Vermont, on special duty, September 23, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.